

## TRADE FINANCE IN DIGITAL ERA: CAN FINTECH HARNESS THE CURRENT RISKS AND CHALLENGES?

Safeza Mohd Sopian  
Nurudeen Abdulkadir  
Norhazlina Ibrahim

*Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia*

### ABSTRACT

Trade and commercial activities are the foundation and supporting pillars of the global economy. It is through trade, particularly international trade, that a country's economy is developed and sustained. It is a fact that FinTech platforms help financial service providers to become more time and cost-efficient in delivering trade finance services, however, the moves come with a high price. As the system becomes complex, the risks associated with it are also high due to systemic vulnerabilities, hackers and security hurdles. This current state requires more rigorous risk identification and management systems along with proficient internal control system, especially for international trade and trade financing. It has propelled many financial intermediaries to be more competitive in committing to the development of digitised channels and propositions, preparing to cede market share to a new generation of providers that have already seized the imperative to respond to market evolution in international trade. The main aim of this paper is to explore how far can FinTech platforms help the financial service providers to be more efficient in providing their services to the end-user while at the same time be excellent to harness the possibilities of cyber and FinTech risk in this digital era. The study reviews past studies done in this area, especially on the risks and challenges, the prospects and opportunities of FinTechs in trade financing and its ability to cope with the risks inherent in FinTech solutions. The findings show that the benefits of FinTech platforms outweigh the shortcomings and with sustained collaboration, standardization and a holistic approach to the development of FinTech solutions, the risks of digital transformations can be considerably reduced.

**Keywords:** Trade finance, risk management, FinTech risk, cyber risk, digital era

### INTRODUCTION

Trade and commercial activities are the foundation and supporting pillars of the global economy. It is through trade, particularly international trade, that a country's economy is developed and sustained. However, trade, be it domestic or international, cannot be effectively consummated without the support and backing of some form of trade credit, insurance or guarantee. Trade finance has evolved over the years as one of the major backbones of global trade, supporting 80-90 percent of world trade activities (International Chamber of Commerce [ICC], 2017; World Trade Organization (WTO), 2016).

The trade finance sector, unlike other financial asset segments, is a very complex, dynamic and evolving product category with certain peculiarities absent in other financial products (ICC, 2016b). The financing of trade and commercial activities involves several risk factors and challenges, particularly in cross-border trade transactions. Although every form of trade and commercial activity contains some element of risks, international trade is more prone to both idiosyncratic and macro risks (ICC, 2014; Grath, 2011).

For centuries, global trade and trade finance have been conducted through a complex array of voluminous, manual-based documentation processes. Letters of Credit (LCs) are the most utilized bank-intermediated method of financing cross-border trades (Ganne, 2018; ICC, 2018b; ICC, 2016). This product consists majorly of stringent, manually-based documentations that are time-consuming, costly and susceptible to fraud and human errors (Asian Development Bank [ADB], 2019; ICC, 2017). LCs accounted for nearly 40 percent of the total trade finance product mix in 2016 (ICC, 2016b). However, the utilization of LCs is now declining, with firms preferring Supply Chain Financing (SCF) and open account modes of payment (Ganne, 2018; ICC, 2017). Furthermore, the emergence of disruptive technologies in the financial sector and beyond such as blockchain technology, artificial intelligence, big data analytics, biometrics, Optical Character Recognition (OCR), Internet-of-Things (IoT), among others, have the potential to significantly overhaul and reposition the trade finance industry to be more inclusive, secure, efficient and cost-effective.

Financial technologies (FinTechs) firms are at the forefront of these financial solutions which are steadily transforming the financial landscape, trade finance inclusive. The digitization, automation and digitalization of the trade finance cycle promise to address issues of information asymmetry, process inefficiencies and regulatory requirements (ADB, 2019). In recent times, banks have increased their collaboration with these FinTechs in developing digital platforms that could significantly reduce transaction cost, transaction time, cybersecurity threats and human errors (Da-Silva, 2018).

The transformative changes brought about by these digital era and technologies continue to reshape and redefine how value is created, captured and delivered across industries. Less human touch is foreseen in this digital era even though Latif and Misbah (2016) mentioned that people is regarded as an enabler in the whole process of effectively delivering the goods and services directly to customers. In this evolution of digital and FinTech era, we continuously need to embrace the process of recognizing, comprehending, and tackling emerging risks connected with these digital platforms. Which in this case, these digital platforms will assist the trade finance industry in developing robust risk management mechanisms in helping the financial institutions to provide better services to the end users. Furthermore, comprehending how these technologies can be harnessed for improved risk management as well as value creation will aid in the sustainability and profitability of the trade finance industry (Deloitte, 2019).

However, with every advancement comes new challenges that must be surmounted. Furthermore, as the trade finance industry becomes fully interconnected and digitalized, the risk and impact of cyberattacks increases. The interconnectedness of various stakeholders across the globe in the trade finance industry intensifies the systemic risk and the vulnerability of the industry to cybercriminals. Also, customer data privacy violations by the largely unregulated FinTechs are some risk factors envisaged which could impact negatively on the image of the financial industry (Lee & Shin, 2018).

The FinTech industry is still evolving and more opportunities and challenges are anticipated on the way. The fundamental question now is: can FinTech platforms help financial institutions to fully exploit the opportunities provided by these technologies while equally overcoming the risk and challenges they pose?

## **TRADE FINANCE IN DIGITAL ERA: RISKS AND CHALLENGES**

Different types of risks may arise in the process of conducting international trade that may adversely affect one of the parties to the trade transaction. Risks such as credit/counterparty risk, operational risks, currency risk, country/political risk, bank risk, reputational risk, fraud risk, compliance risk, cybersecurity risk, among many others, could disrupt the flow of trade and the availability of trade finance (ICC, 2014). However, this current study is limited to trade finance risks associated with the use of FinTech solutions by banks in the present digital era. Notable risks and challenges identified by previous studies include cybersecurity risk, customer data and

privacy breach, compliance/regulatory challenges, operational risk and even systemic risk (Enriques & Ringe, 2020; Clements, 2019; Lee & Shin, 2018; Temelkov, 2018; Giudici, 2018; Bank for International Settlement [BIS], 2018). Trade finance as an integral part of traditional banking activities faces the same threats in the use of FinTech solutions as faced by other segments of the financial sector. The digital era championed by Bigtechs and FinTechs is a double-edged sword that has both favourable and unfavourable consequences for the trade finance sector. Enhanced cross-border payment solutions and robust credit risk management systems utilizing Artificial Intelligence (AI), machine learning and big data analytics can be a game changer for the trade finance industry (Ng & Kwok, 2017). Yet, the same FinTech platforms can be the source of known and unknown threats to the growth and stability of the financial sector particularly the trade finance industry (Giudici, 2018). Some of the prominent risks and challenges associated with the adoption of FinTech solutions in delivering trade finance services will be elaborated afterwards.

### **Compliance/Regulatory risk**

Risk such as compliance risk remains a huge area of concern among trade finance stakeholders (Financial Conduct Authority [FCA], 2013; PwC, 2016). Banks are expected to comply with regulatory requirements which are unintentionally inhibitive to the flow of trade finance. Compliance with Anti-money laundering (AML), countering the financing of terrorism (CFT) and Know Your Customer (KYC), among others, have made banks, particularly global banks to deleverage and de-risk, thereby cutting off the flow of funds to those that most need it (i.e. MSMEs in developing economies) (ICC, 2019). Stringent measures and standards for combating money laundering and financing of terrorism have been developed by the Financial Action Task Force (FATF) in 2012 to curtail the use of financial institutions as conduits for criminal and illicit activities. The trade finance industry happens to be more susceptible to be used for financial crimes due to the volume and complexity of manually processed trade finance documentations (ICC, 2019; SiaPartners, 2016). Compliance with risk management strategies and measures is crucial for the trade finance industry to checkmate the activities of fraudsters and criminals. Furthermore, the reputation, stability, safety and soundness of the international finance system hinge on full compliance with the risk management standards provided by FATF. However, there is a growing concern that a great number of financial institutions may not be able to fully comply with these regulatory requirements. The cost of regulatory compliance is exorbitantly high which banks may fail to fulfil or refuse to engage in trade finance activities (ICC, 2019).

Also, the risk of compliance is further aggravated when banks collaborate with FinTech firms to offer trade finance services. FinTechs are largely unregulated while banks are under the purview of well-defined regulations. A high tendency of breaching regulatory requirements is present in this form of collaboration between FinTechs and banks. The traditional banking industry is fully matured, stable and familiar to regulators and therefore malleable to regulatory requirements. FinTechs on the other hand, are new, evolving and most regulators are still inexperienced in the supervision of finTechs (Enriques & Ringe, 2020; Giudici, 2018). Enriques and Ringe (2020) pointed out that such partnerships arrangements pose problems of regulatory enforcement and effective supervision which may consequently lead to instability in the market and systemic risk.

### **Operational risk**

Operational risk in the trade finance sector is high due to the large volume of manual, paper-based processing of trade finance transactions. The risk of human error and mistake is ever-present during the voluminous and complex documentation of trade finance contracts. Also, a general paucity of trade finance technical specialists exists in the industry, further increasing the associated operational risk. Another operational risk that can be of serious concern is fraud and money laundering through trade finance transactions. Due to the large number and intricacy of

trade finance activities, criminals and fraudsters could disguise as legitimate trading partners. Only due diligence, experienced and skilled personnel, who are lacking, can mitigate such risk (PwC, 2016).

Operational risk refers to the risk associated with organizational internal processes, people and systems performing below required standards, or from outside circumstances (ICC, 2013). Several operational risks are encountered in trade finance such as fraud risks, which usually occurs if there is a breach of internal controls. Other risk factors include processing errors, legal and documentation risks (for example, accepting and processing the wrong documents. Checks and balances are very important in mitigating such risk. Also, experienced and skilled personnel is another key factor that can reduce operational risk (ICC, 2013).

Additionally, the use of FinTech solutions also exposes banks to operational risk. Although manual-based trade finance documentation is time consuming, prone to human errors and inefficient, the use of advanced financial technology solutions may also pose other operational challenges. Fintech platforms may increase the complexity of delivering trade finance services especially if the platform is managed by a third party. This distribution of trade finance service delivery between banks and FinTechs reduces the transparency of end-to-end operations. This also makes it more cumbersome for banks to manage and control operational risk. Also, dependence on FinTech solutions managed by third party vendors makes banks vulnerable to the collapse of critical services provided by the third party in case of system failure (BIS, 2018). Furthermore, FinTechs are based on new and untried business models that exposes them to regulatory uncertainties. Fraudsters can use these loopholes in regulation to commit fraudulent activities. Additionally, lack of skilled personnel that can effectively use FinTech technologies to detect fraud incidences is another operational risk (Ng, & Kwok, 2017).

### **Cybersecurity risk**

The issue of cybersecurity has gain prominence in recent times as one of the major risks faced by financial institutions, FinTechs, financial regulators as well as national governments. Buckley et al., (2019) expressed that cybersecurity threats are the major source of systemic risk in the financial sector. Cybersecurity threats are possible risks factors encountered by firms and individuals while engaging in online activities such as e-trading, online payments, customer data storage and sharing of sensitive information via computer networks. Recent studies have shown that more than 50% of financial institutions worldwide are faced with cybersecurity threats daily (Dandapani, 2017). The increased interconnectedness of the financial ecosystem made possible through FinTech solutions has also brought about a commensurate upsurge in the rate and severity of cybercrime activities across the globe. This trend makes the trade finance industry which is now moving towards full automation and digitalization a target of cybercrime operations. Although cybercrimes are not new in the financial sector, the emergence of FinTechs had further increased the interconnectedness of the financial world, further amplifying the access points for potential cyberattacks and exacerbating the impact of such cybercrimes. The financial loss, reputational damage and economic impact of such cyberattacks have skyrocketed in the past years. An instance of the severity of such cybercrimes was the loss of \$400 million by a Russian bank to hackers. Similarly, in 2014, JP Morgan Chase's computer network was breached by cybercriminals which resulted in the theft of sensitive information of about 83 million customers (Buckley et al., 2019; Dandapani, 2017).

Banking and finance activities are principally based on trust and confidence in the system. Cybercrime activities can significantly erode the trust and confidence individuals and businesses have in FinTech solutions. Banks nowadays are highly dependent on complex digitalized technologies wherein any cyberattack disruption can lead to a major financial crisis if appropriate safeguards are not put in place (Buckley et al., 2019; Lukonga, 2018). Furthermore, in the future, there is the likelihood of the emergence of monopolies in the FinTech industry that could negatively affect the whole trade finance industry. In the event of a breakdown or cyber-

attack of a mega FinTech platform upon which trade finance activities depend, systemic collapse of trade finance market could ensue. Relying on a third party for the provision of critical services may sometimes result in denial of such services due to systems failure, collapse or other unforeseen circumstances (Da-Silva, 2018).

### **Customer Data and Privacy Breach**

Another area of notable concern among financial regulators, financial institutions and national governments is the issue of protecting customers' data and privacy in the digital world. Customer data privacy (including financial data) could be violated, stolen or sold to a fourth party without the consent of the bank involved. The recent Facebook–Cambridge Analytica data scandal over the alleged illegal accumulation and utilization of the personal data of millions of Facebook users is a perfect example of such abuse (Da-Silva, 2018).

Prior to the emergence of FinTechs, financial institutions were the sole custodians of their customers' sensitive data. This data is shared or made public only under regulatory approval. Today, customers' data are available to many third-party institutions collaborating with banks to deliver innovative and satisfying services to customers. This FinTech firms are not under any strict and guided regulation with respect to customer data and privacy. Massive amount of data about individuals and business enterprises are available in digital format. Data ubiquity is now the new norm of today's digital era. This ubiquity of data poses great challenge for data privacy and security in the financial sector, trade finance inclusive. The possibility of data theft and misuse have increased with the supersonic explosion of digital data online. Trade financing documents can be stolen, hijacked or intercepted by cybercriminals which could result in huge financial loss and reputational damage for parties involved (PwC, 2016b).

### **TRADE FINANCE IN DIGITAL ERA: THE PROSPECTS AND OPPORTUNITIES**

The future of global trade finance is at the crossroads. Disruptive and speedy transformations in the trade finance industry are on the horizon. The increase of non-bank participants (FinTechs) in trade finance, utilizing advanced technologies to deliver trade finance solutions is a boost to the trade finance market. The prospects and opportunities in utilizing Artificial Intelligence (AI), Big Data analytics, Distributed Ledger Technology (DLT), Biometrics, among others, promise to resolve most of the challenges faced in the provision of trade finance, particularly to MSMEs in the emerging and developing countries. These technologies have the prospects to (i) eliminate the voluminous paper-based trade finance documentation (ii) mitigate human error (iii) enhance the speed, visibility and efficiency of the trade finance cycle (iv) enhance the flexibility and accommodation of changes in market/regulatory requirements (v) diminish the information opacity of clients (vi) and augment the AML/CFT and KYC efforts of regulatory authorities (ADB, 2019). Although these novel innovations are at the trial stage, they promise a revolutionary transformation of the trade finance industry and beyond.

Moreover, investments in FinTech have increased significantly in recent years. Banks happen to be some of the major investors in FinTech solutions (Lee & Shin, 2018). In just five years, from 2013 to 2018, investments in FinTechs increased fivefold from \$18.9 billion to \$111.8 billion (Sloboda & Demianyk, 2020). This trend shows that banks and other financial institutions have realized the opportunities and prospects these FinTech platforms offer. As the findings by Wahid (2016) opined that size of the banks or being large does not necessarily being efficient, many banks regardless the size, big or small are currently racing to equip their financial services with the latest technology to ensure they can remain competitive and sustained in the financial industry. Furthermore, with FinTech solutions, the trade finance industry can drive down trade finance cost, advance the speed and efficiency of trade finance flow, improve customer experience, and boost the revenue base of the industry through expanding the market reach of trade finance providers. Also, the trade finance industry can employ advance credit scoring technologies to reduce the information opacity of risky client segments. Besides,

FinTech solutions can be used to close the gap in trade finance availability, especially to SMEs. The recent partnership of Marco Polo Network (a trade and working capital finance network) and Mastercard in 2019 to advance global trade through the use of advanced technologies attests to the prospects of FinTech solutions. The two partners are collaborating to create an interconnected digital trade ecosystem that will enhance visibility in trade relationships, ease access to financing options, reduce information asymmetry, speed up trade finance processes and engender trust in trade transactions (Sutter, 2019).

In addition, industry experts in the trade finance industry have expressed great optimism in the capability of these financial technologies to revolutionize trade and trade finance. Moreover, industry practitioners have expressed that the future of trade finance will be defined by those firms (financial and non-financial) that are able to harness the potentialities offered by advanced technologies in developing new and innovative ways of facilitating trade across the globe (FinTech Futures, 2020).

### **TRADE FINANCE: CAN FINTECH PLATFORMS HARNESS THE RISKS AND CHALLENGES?**

In the past decades we have witnessed the global financial system being gradually liberalised and various changes such as the deregulation, the introduction of new players, new financial instruments and the strengthened of regulation have taken place (Zolkifli et al., 2015). Now, the emergence of FinTech has multiplied the element of complexity in the financial system which slowly has been accepted and become the chosen platform for efficient banking and financing transactions. However, these new innovations in the form of FinTech have also increased risks that the banks are exposed to, such as technology related type of risks.

Although the evolution of FinTech platforms in the trade finance industry presents new forms of risks and challenges, these same digital platforms can as well be used to augment the risk management capabilities of the industry (Deloitte, 2019; Institute of International Finance & Mckinsey & Company, 2017). Many risks and challenges associated with trade finance supply can be effectively mitigated by these evolving technologies. Operational inefficiencies, human errors, fraud, regulatory requirements, credit scoring, among others, can be effectually handled by fintech solutions (Kim et al., 2019; IIF & Mckinsey & Company, 2017). Among the most promising FinTech solutions, that can transform the trade finance landscape include the following: distributed ledger technology (DLT) and blockchain, artificial intelligence, data analytics, biometrics, internet of things (IoT), character recognition technologies (i.e. OCR/ICR), among others.

Risk management in the age of digital disruptions requires a more rigorous and holistic approach rather than a fragmented view of risk factors. For FinTechs and financial institutions in the trade finance industry to harness the full potentials of digital platforms, a realignment of industry standards, approaches, structures, procedures, people, and technologies is a prerequisite (Deloitte, 2019). This type of approach becomes necessary due to the systemic nature of digitally related risk outcomes. Any risk management framework that does not take a holistic approach to risk management in this digital era is bound to fail. Financial institutions employing FinTech applications for trade finance need to ensure an all-inclusive digital risk transformation agenda (Deloitte, 2019).

Although FinTech platforms are still in the trial stage, several pilot projects by consortia of financial institutions, industry leaders, as well as FinTech start-ups across the world, have attested to the positive impact of these technologies in general and risk management in particular. Fintech platforms have been developed and tested within various segments of the trade finance industry (i.e. trade finance, supply chain finance, cargo tracking and insurance). Some of these initiatives include:

a. The Bay Area Trade Finance Blockchain Platform (BATFB)

BATFB is an initiative of the central bank of China (People's Bank of China), based on DLT technology, which was launched in the 3<sup>rd</sup> quarter of 2018. As at the 4<sup>th</sup> quarter of 2019, the BATFB platform was used by 28 banks situated in Shenzhen and trade transactions worth over \$4.5 Billion were conducted with it. The platform was built to facilitate real-time tracking of trade activities, reduce manual-based transactions and mitigate fraud incidences (Patel & Ganne, 2019).

b. Marco Polo Network

The MarcoPolo Network is a FinTech platform specifically designed for the trade finance industry. The network is the largest trade finance platform in the world today. The network was established in 2017 by a joint collaboration between TradeIX, R3 (both technology firms), leading financial institutions in the world such as Bank of America, and their corporate customers. The network is an open platform that connects the various participants in the trade finance ecosystem while allowing participants the independence to build solutions, integrations and also control their data thereby eradicating a centralized point of failure. The network is built upon Distributed Ledger Technology (DLT) that allows for optimum levels of connectivity, privacy and security, and also allows real time data sharing among network members. The network brings onboard the various participants in the trade finance ecosystem under a single shared and connected network that has the potential of reducing cost, increasing revenue, mitigating risk and enhancing the speed of trade finance transactions (MarcoPolo, n.d.).

c. Insurwave

Insurwave is a FinTech platform that was launched in 2018 specifically for the marine insurance value chain. It was initially an outcome of a joint venture between Ernst & Young (EY) and Guardtime (a tech company). Based on a SaaS private blockchain technology, Insurwave seeks to enhance efficiency, trust, visibility and collaboration among industry participants through automation, asset data management, provision of high-quality data, risk insights, and smart contract management. The platform seeks to improve risk assessment measures by providing clients with up-to-date risk data. The platform had received a positive response from industry leaders and has grown from 3 participants to 20 in less than 2 years of its inception. Furthermore, operation-wise, the platform activities had experienced quantum leaps from a mere 25 notifications a month to more than 10,000 (Patel & Ganne, 2019).

d. Bank Payment Obligation (BPO)

BPO is a financing solution that could simplify most of the payment activities in trade transaction. It offers buyers and suppliers (irrespective of size, geography and industry) a framework to secure and finance their trade transactions. Their first launching on BPO was announced in 2010. Since then, SWIFT and the International Chamber of Commerce (ICC) have been collaborating, including in the development and publication of the Uniform Rules for Bank Payment Obligations (Swift & Opus, 2016). As the saying from Jari Hanninen, Head of Structured Finance for Nokia Network, Finland: *"It is important for corporates becoming invited and actively involved in the process of conceiving new models and solution for trade. Such engagement would be helpful where BPO will ensure alignment of industry propositions with client need and expectations"*. Jari strongly proposed BPO usage.

These are but a few of the plethora of such projects that are increasing by the day in the trade and trade finance arena. Though the DLT and blockchain are the most conspicuous basis of such transformations in the industry, other technologies such as Artificial Intelligence (AI),

Internet of Things (IoT), big data, among others, are playing significant roles in conjunction with each other (Patel & Ganne, 2019).

However, with all these laudable advancements, there exist several challenges that must be addressed for these platforms to be effectively harnessed. Major challenges might disturb and hinder the sustainability and long-term success of these solutions. The challenges will be discussed in the following section.

### **FINTECH PLATFORMS: ISSUES AND CHALLENGES**

Fintech platforms are the recent hype in the financial and business world. These financial solutions are presented as the game-changer in the financial industry. Nonetheless, FinTech platforms are faced with several obstacles that require urgent solutions. Below are some of the major impediments faced by FinTechs:

#### **a. Technical Issues**

The benefits, potentials and possibilities these FinTech solutions offer for the financial sector, particularly the trade finance industry, can be hindered by issues to do with interoperability and technical expertise (Kim et al., 2019). To deal with new and emerging risks successfully, industry participants must be able to communicate through these platforms effectively. Without the technical capacity and the ability of these FinTech platforms to interoperate seamlessly, then the capacity to harness these platforms for enhanced risk management will be very limited. Proper risk assessment and management relies on reliable and up-to-date data. A siloed view of trade finance transaction data will prevent a proper risk assessment of the trade deal.

The issue of interoperability is among the most cited challenges by industry practitioners (Patel & Ganne, 2019; Ganne, 2018). Many FinTech platforms have been developed that cannot communicate with each other (Ganne, 2018). For instance, we have IBM blockchain based on Hyperledger Fabric, Ethereum blockchain by Microsoft, and Corda developed by R3CEV consortium. Although the proliferation of various DLT and blockchain platforms are good for the financial world, the lack of connection and interoperation between these platforms limits their impact, use and scalability in the industry (Ganne, 2018).

#### **b. Standards, Rules and Regulations Issues**

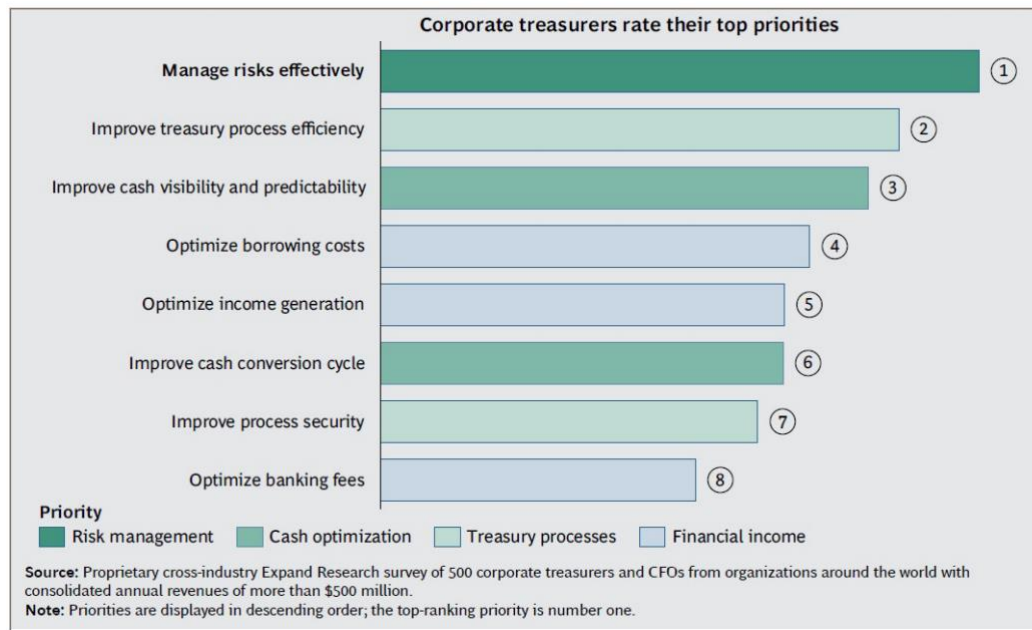
Among the most formidable challenges confronting the international trade industry is the lack of common and unified standards, rules and regulations across different geographical and market jurisdictions. Each market jurisdiction has its distinct procedures, custom rules, trade regulations, terminology, and laws. These lacks of uniformed standards become even more detrimental to cross-border trade as the world increasingly becomes more connected (i.e. through advancement in technology). This creates uncertainty and barrier towards the adoption of digital solutions by stakeholders in the industry. To fully harness the potentials of FinTech solutions and enhance risk management, uniformed and harmonious digital standards and legal rules are indispensable (Patel & Ganne, 2019; Ganne, 2018).

#### **c. Data Privacy and Security Issues**

Also related to rules and regulations challenges is data privacy and security. The importance of data as the “new oil” and the most valuable resource in the business world is now acknowledged (ICC, 2017). Through data, financial institutions and FinTechs can scale-up their market outreach, customize products, enhance their risk assessment capabilities and develop efficient and effective organizational strategies (ICC, 2017). Fintech platforms have the potential of harnessing data from different sources for further analysis and insights. However, the way and

manner customer data are owned, secured, and used pose a great challenge to the nascent FinTech industry and financial institutions as well. Data privacy and protection regulations vary across trade jurisdictions (Patel & Ganne, 2019). With weak country regulations and rules, customer data are vulnerable to abuse and theft. However, stringent regulations can suppress the benefits these platforms provide. There is the need for legal clarity, standardization, and sustained collaboration among all stakeholders in the industry (Ganne, 2018).

Above all these issues, the most important question is, will financial institutions, as traditional providers of trade financing solutions around the world, perceive the shifting tide of digitization early enough, react quickly and decisively enough to be seen by clients as having understood, internalised and acted upon the changing needs and expectations of the market? Some financial institutions might respond promptly and readily while others might comfortably wait for the right time to come. This is all depending on the individual financial institutions on how they defined their risk and opportunities and acceptance towards digitization era. Digitization is a natural evolution of corporate businesses and transactional processes related to the conduct of cross border trade financing and global supply chain ecosystem (Swift & Opus, 2016). Many corporate businesses realize that the digitization could simplify many processes and manage inherent risk in traditional trade more effectively. **Figure 1** below evidenced the response for a survey done on corporate views on the importance of digitization.



**Figure 1:** Survey on Corporate Top Priorities for Digitization

Source: Corporate Treasury Insights 2015, Boston Consulting Group

## RECOMMENDATION AND WAY FORWARD

The benefits of FinTech solutions to international trade and trade finance sector are irrefutable. Advancements in Artificial Intelligence, DLT/blockchain, IoT, analytics, among others, have signalled the arrival of a new dawn in the business world, particularly the financial sector. Fintech companies are on the rise with financial solutions that promise a great number of potentialities. Conversely, these same solutions have the inherent potential of opening new frontiers of unknown risks and challenges. Several plausible recommendations, particularly by industry practitioners, have been proffered to maximize the benefits of these FinTech platforms while minimizing the risk they pose. The ICC (2017), in its report on trade finance, proffers three key recommendations that will secure the future of FinTech solutions in trade finance. First, the need for sustained collaboration between FinTechs, financial institutions, regulatory authorities

and countries is key to any meaningful progress of these technologies. Second, uniformity of rules, regulations and standards on digital solutions will foster greater visibility, diminished risk and increased adoption of these platforms by financial institutions. Finally, encouraging industry practitioners to develop and apply more practical solutions that are visible and demonstrable. These can only be achieved through training and developing FinTech experts and engaging in sustained research and development (R&D) of technical solutions.

## CONCLUSION

Disruptive innovations are now the “new normal” of the future. Technological advancements are changing almost every aspect of society. From the way, individuals and groups socialize, trade and communicate, technology has been the driving factor. The international trade sector, comprising the trade finance industry, is witnessing an unprecedented disruption in the way and manner international trade are conducted and financed. Traditionally based on manually intensive approaches, trade finance is moving towards a digital and paperless method of financing international trade. The study reviews both the risks and opportunities inherent in fintech platforms and proffers solutions based on recommendations by industry practitioners. Fintech platforms offer a more efficient, cost-effective and secured way of financing trade across borders. Nevertheless, they have also unveiled new risks and challenges that must be addressed. Cybersecurity threat remains the major concern for financial sector while utilizing FinTech solutions. Financial technologies (FinTechs) are fast gaining prominence in the trade finance industry. To fully exploit the full benefits of FinTech platforms and minimize their risk, sustained collaboration, standardization and more practical solutions are necessary. The future of trade finance will be shaped by those firms that are able to exploit the prospects of FinTechs while fully harnessing the risks envisaged.

## REFERENCES

- Asian Development Bank. (2019). *Asia-Pacific trade facilitation report 2019: Bridging trade finance gaps through technology*. <https://www.adb.org/sites/default/files/publication/523896/asia-pacific-trade-facilitation-report-2019.pdf>
- Bank for International Settlement. (2018). Sound practices: Implications of fintech developments for banks and bank supervisors. <https://www.bis.org/bcbs/publ/d431.pdf>
- Buckley, R. P., Arner, D. W., Zetzsche, D. A., & Selga, E. (2019). The dark side of digital financial transformation: The new risks of fintech and the rise of techrisk. *UNSW Law Research Paper*, (19-89). <https://www.bis.org/bcbs/publ/d431.pdf>
- Clements, R. (2019). Regulating Fintech in Canada and the United States: Comparison, challenges and opportunities. *University of Calgary, School of Public Policy Research Series*.
- Dandapani, K. (2017). Electronic finance—recent developments. *Managerial Finance*, 43(5), 614-626.
- Da-Silva, L. A. P. (2018, June). Fintech in EMEs: Blessing or curse? In *Bank for International Settlement, Panel remarks at CV Meeting of Central Bank Governors of CEMLA-Asuncion, Paraguay*.
- Deloitte. (2019). *Future of risk in the digital era* <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/finance/us-rfa-future-of-risk-in-the-digital-era-report.pdf>
- Enriques, L., & Ringe, W. G. (2020). Bank-fintech partnerships, outsourcing arrangements and the case for a mentorship regime. *European Corporate Governance Institute-Law Working Paper*, (527).
- Financial Conduct Authority. (2013). *Banks' control of financial crime risks in trade finance*. <https://www.fca.org.uk/publication/thematic-reviews/tr-13-03.pdf>
- FinTech Futures. (2020, January 29). The future of trade finance. <https://www.fintechfutures.com/2020/01/the-future-of-trade-finance/>

- Ganne, E. (2018). *Can blockchain revolutionize international trade?*. WTO.
- Grath, A. (2011). *The handbook of international trade and finance: the complete guide to risk management, international payments and currency management, bonds and guarantees, credit insurance and trade finance*. Kogan Page Publishers.
- Giudici, P. (2018). Fintech risk management: A research challenge for artificial intelligence in finance. *Frontiers in Artificial Intelligence*, 1, 1.
- Institute of International Finance & McKinsey & Company. (2017). *The future of risk management in the digital era*. <https://www.mckinsey.com/business-functions/risk/our-insights/the-future-of-risk-management-in-the-digital-era>
- International Chamber of Commerce. (2013). *Global risks trade finance report*. International Chamber of Commerce.
- International Chamber of Commerce. (2014). *ICC trade register report summary: Global risks in trade finance*. International Chamber of Commerce.
- International Chamber of Commerce. (2016). *Rethinking trade & finance*. International Chamber of Commerce.
- International Chamber of Commerce. (2016b). *ICC trade register report: Global risks in trade finance*. International Chamber of Commerce.
- International Chamber of Commerce. (2017). *Rethinking trade & finance*. ICC Banking Commission.
- International Chamber of Commerce. (2018b). *ICC trade register report: Global risks in trade finance*. International Chamber of Commerce.
- International Chamber of Commerce. (2019). *Banking regulation and the campaign to mitigate the unintended consequences for trade finance: A milestone report*. <https://iccwbo.org/publication/banking-regulation-campaign-mitigate-unintended-consequences-trade-finance-milestone-report/>
- Kim, K., Beck, S., Tayag, M. C., & Latoja, M. C. (2019). 2019 Trade finance gaps, growth, and jobs survey. *ADB Briefs No. 113*. 1-8.
- Latif, L. F. & Misbah, H. (2016). Exploring the element of “people” from an Islamic perspective. *The Journal of Muamalat and Islamic Finance Research*, 13(1), 83-95.
- Lee, I., & Shin, Y. J. (2018). Fintech: Ecosystem, business models, investment decisions, and challenges. *Business Horizons*, 61(1), 35-46.
- Lukonga, I. (2018). *Fintech, inclusive growth and cyber risks: Focus on the MENAP and CCA Regions* (No. 18/201). International Monetary Fund.
- MarcoPolo. (n.d.). *About the Marco Polo network*. MarcoPolo. <https://www.marcopolo.finance/about/>
- Ng, A. W., & Kwok, B. K. (2017). Emergence of fintech and cybersecurity in a global financial centre: Strategic approach by a regulator. *Journal of Financial Regulation and Compliance*, 25(4), 422-434.
- Patel, D. & Ganne, E. (2019). *Blockchain & DLT in trade: A reality check*. TFG Publishing Limited.
- PricewaterhouseCoopers (PwC). (2016). *Trade finance: Understanding the financial crime risks*. <https://www.pwc.co.uk/forensic-services/assets/pwc-and-polestar-financial-crime-risks-and-trade-finance-july-2016.pdf>
- PricewaterhouseCoopers (PwC). (2016b). *Security challenges in the evolving FinTech landscape*. <https://www.pwc.in/assets/pdfs/consulting/cyber-security/banking/security-challenges-in-the-evolving-fintech-landscape.pdf>
- SiaPartners. (2016). *Anti-money laundering risk in trade finance*. [https://en.finance.sia-partners.com/sites/default/files/post/visuels/sia\\_partners\\_insight\\_-\\_anti-money\\_laundrying\\_risk\\_in\\_trade\\_finance.pdf](https://en.finance.sia-partners.com/sites/default/files/post/visuels/sia_partners_insight_-_anti-money_laundrying_risk_in_trade_finance.pdf)
- Sloboda, L. Y., & Demianyk, O. M. (2020). Prospects and risks of the fintech initiatives in a global banking industry. *Problemy Ekonomiky*, (1), 275-282.

- Sutter, D. (2019, September 4). *Mastercard joins the Marco Polo network to advance global trade through optimized financing*. Trade Finance Global. <https://www.tradefinanceglobal.com/wire/mastercard-joins-the-marco-polo-network-to-advance-global-trade-through-optimized-financing/>
- Swift & Opus. (2016). *Digital trade and trade financing: Embracing and shaping the transformation*. Information Paper. [https://www.globaltradecorp.com/media/swift\\_trade\\_digitisation.pdf](https://www.globaltradecorp.com/media/swift_trade_digitisation.pdf)
- Temelkov, Z. (2018). Fintech firms opportunity or threat for banks?. *International Journal of Information, Business and Management*, 10(1), 137-143.
- Wahid, M. A. (2016). Comparing the efficiency of Islamic and conventional banks based on the evidence from Malaysia. *The Journal of Muamalat and Islamic Finance Research*, 13(1), 35-60.
- World Trade Organization. (2016). *Trade finance and SMEs: Bridging the gaps in provision*. WTO.
- Zolkifli, N. A, Janor, H. & Hamid, M. A. (2015). Market risk and bank specific determinants of commercial banks in Malaysia. *The Journal of Muamalat and Islamic Finance Research*, 12(2), 1-13.

*Received date: 10<sup>th</sup> March 2020*

*Acceptance date: 29<sup>th</sup> March 2021*

*Published date: 31<sup>st</sup> May 2021*

Safeza Mohd Sopian (Corresponding author)  
Faculty of Economics and Muamalat  
Universiti Sains Islam Malaysia  
Bandar Baru Nilai  
71800, Nilai, Negeri Sembilan  
MALAYSIA  
Email: safeza@usim.edu.my

Nurudeen Abdulkadir  
Faculty of Economics and Muamalat  
Universiti Sains Islam Malaysia  
Bandar Baru Nilai  
71800, Nilai, Negeri Sembilan  
MALAYSIA  
Email: nuraalkas1@gmail.com

Norhazlina Ibrahim  
Faculty of Economics and Muamalat  
Universiti Sains Islam Malaysia  
Bandar Baru Nilai  
71800, Nilai, Negeri Sembilan  
MALAYSIA  
Email: norhazlina@usim.edu.my