



SWIFT INSTITUTE BRIEFING PAPER

DUPLICATE FINANCING:

What is it, how can we resolve it, and how does it contribute to the trade finance gap?

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Executive summary

This briefing paper examines the issue of duplicate financing fraud in trade finance. It discusses the concept of duplicate financing, along with its implications for the real economy and its role in widening the trade finance gap. The paper outlines a few potential approaches or solutions that can address duplicate financing fraud, while highlighting the digitalisation of trade finance as a key strategy that would also help the sector to manage other financial crime threats in trade finance.

The discussion highlights the following points:

- Duplicate financing refers to the practice of using the same documents, such as commercial invoices, bills of lading, warehouse receipts, or purchase orders, more than once to secure credit from various lenders who may be located in one or more countries.
- It is difficult to determine the exact scale of the problem, for so much of it goes undetected due to inadequate identification procedures and a lack of cooperation and coordination among financial institutions. Nonetheless, it would not be incorrect to say, in light of recent scandals discovered in the past two years, that duplicate financing fraud has a severe impact on the global financial industry, resulting in losses of billions of dollars and making lenders less confident about providing trade finance facilities.
- Due in part to the fraud concerns associated with trade finance, including duplicate financing, the trade finance gap reached an all-time high of \$1.7 trillion in 2020, which has restricted the size of the financial market. To reduce the risk of loss due to trade finance fraud and to minimise operational costs, financiers around the world have been either off-boarding clients or providing funding at unfavourable terms, resulting in trade finance needs not being met. Although micro, small and medium-sized enterprises (MSMEs) are the ones most acutely affected, mid- to large-sized companies are also facing significant liquidity issues because of this approach.
- Duplicate financing is a large fraud challenge for financing institutions, and, at the same time, they find it difficult to detect and prevent, mainly due to the fact that they operate in information silos. Due to privacy laws and concerns about competition, financial institutions often do not share information with each another, which limits any checks that they can conduct on those within their own institution or within its network.
- Establishing a single global trade finance platform using new technologies, whether blockchain or cloud computing, is an effective way forward to combat the issue of duplicate financing, to increase the trust of financial institutions and traders, and to make trade finance more accessible to legitimate borrowers and users. Such a platform should ensure that the authenticity of trade transactions can be verified while maintaining client and commercial confidentiality.
- Due to the traditional paper-intensive nature of the trade finance industry, it has become vulnerable to many financial crimes, including fraud, money laundering and

terrorist financing. To address the issue of financial crime in trade finance generally, this paper emphasises the importance of digitalisation, including paperless bills of lading, promissory notes etc., and establishing appropriate mechanisms to ensure the effective exchange of information across financial institutions globally. The lack of global standards and platforms, varying legal and regulatory frameworks, and technological restrictions may present a number of obstacles to achieving this task, but the paper underlines the importance of an industry-wide approach and collaboration to achieve this goal.

I. Introduction

This briefing paper examines the issue of duplicate financing in trade finance. It mainly analyses the concept of duplicate funding, as well as the seriousness and effects of duplicate financing fraud in the real economy and in terms of how it contributes to the global trade finance imbalance. The paper also underlines the difficulties financial institutions face in identifying and preventing duplicate financing fraud, which are mostly centred around concerns about confidentiality and privacy, and the lack of a standardised method for addressing this risk.

The paper also addresses the fundamental question of whether there are any solutions to stop duplicate financing fraud. Here it is important to note that the COVID-19 epidemic caused the biggest invention boom in global trade: during this 12- to 18-month period, the industry underwent more digitalisation than it had in the previous few years. In order to effectively manage the risk of duplicate financing fraud and other financial crimes in global trade finance, the paper places emphasis on the adoption of a unified strategy and the digitalisation of trade finance by creating a trade finance platform that is interoperable between markets, whether established using a distributed ledger technology, a cloud application or another technology.

The key points are summarised in the Executive Summary above. The main body of the paper consists of five further sections, beyond this introduction:

- Section II explains the concept of duplicate financing.
- Section III highlights the gravity of duplicate financing and of its impacts on the real economy and on widening the trade finance gap.
- Section IV assesses the challenges faced by financial institutions in detecting and preventing duplicate financing.
- Section V examines a few solutions for countering financial crime threats and duplicate financing in particular.
- Section VI offers a brief conclusion, summarising the findings of this briefing paper and making some general recommendations as to possible next steps.

II. What is duplicate financing?

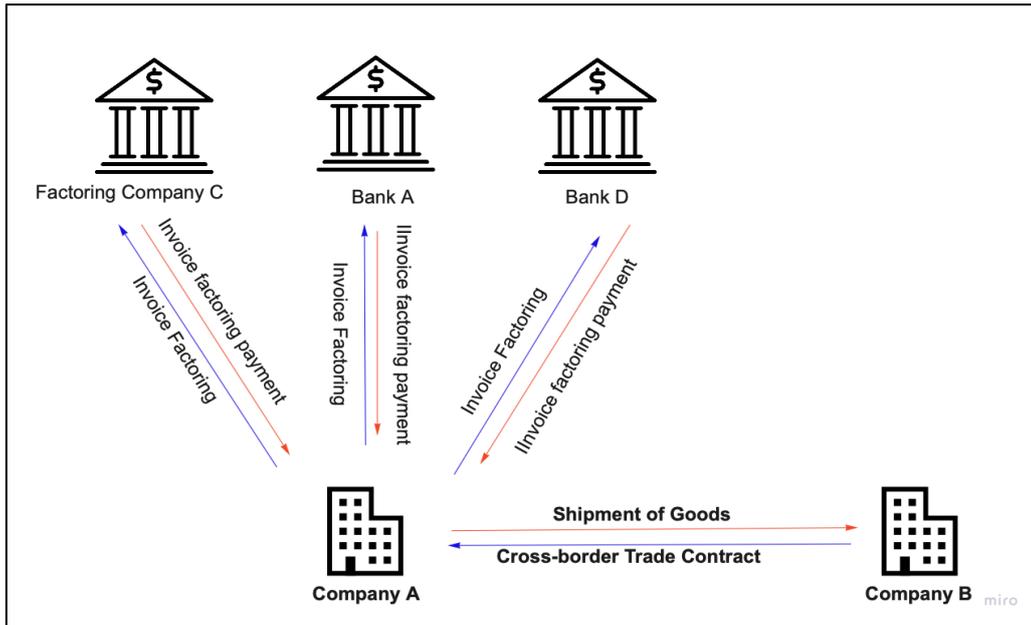
Trade receivables and other payment instruments, such as promissory notes, cheques, drafts, and bills of exchange, function as negotiable instruments that can be transferred to third parties, including banks and other financial institutions. The sale or transfer of these negotiable instruments through discounting, factoring, or forfeiting enables suppliers to obtain funds to meet their working capital needs. Suppliers attempt to obtain immediate funding against these negotiable instruments from financial institutions as soon as they are received in order to alleviate their cash flow problems. For instance, invoice financing, which has been identified as a consistently expanding segment of the financial market over the past decade, grew to become the third-largest financing market in 2016.¹

However, these negotiable instruments, when combined with paper-based receivables, present several challenges and risks for financial institutions. These challenges and risks are primarily caused by ineffective processes, such as delays and errors in paper documentation and manual workflows, as well as inadequate exchange of information across financial institutions. One of the key risks faced by all financial institutions in trade finance is the potential for 'duplicate financing'.

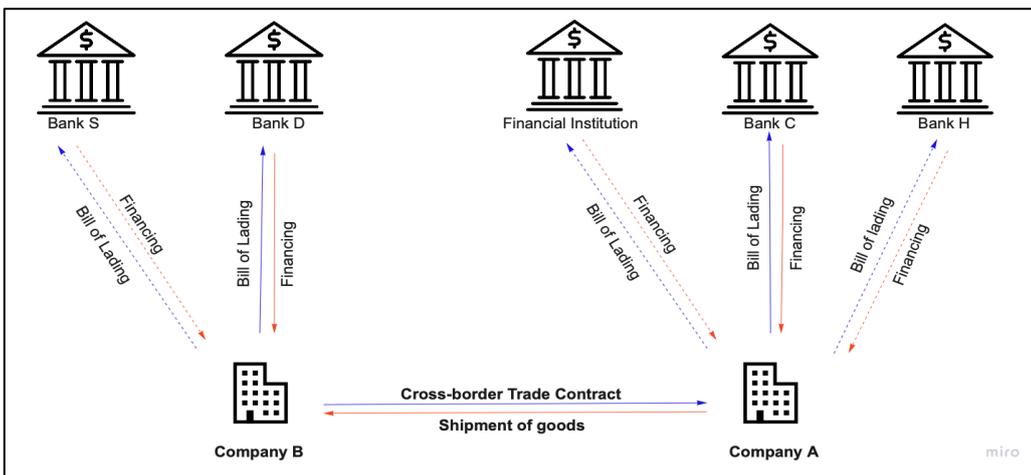
There is no universally agreed legal definition of duplicate financing. However, the term 'duplicate financing fraud', as it is generally understood in trade finance, refers to the practice of using the same documents, from invoices to bills of lading, warehouse receipts, and purchase orders, more than once (possibly multiple times) to secure financing from several financiers. To better comprehend the concept of duplicate financing fraud, let us take a closer look at the following instances:

- (a) **Duplicate invoicing:** Company A enters into a cross-border trade contract with Company B. On exporting goods, Company A sells an invoice to a factoring Company C (usually a bank or other financial institution) for an agreed-upon percentage of the invoice's total amount to be paid immediately. This will help Company A to stabilise its cash flow and serves as a significant source of income for the lending institution, which will be paid the full invoice amount by the original buyer on the due date. Now, if Company A sells the same invoice, which has previously been sold to Company C, to more than one financial institution, this constitutes duplicate financing fraud. In such an instance, the buyer will pay just one financial institution for the invoice, leaving the other(s) unpaid.

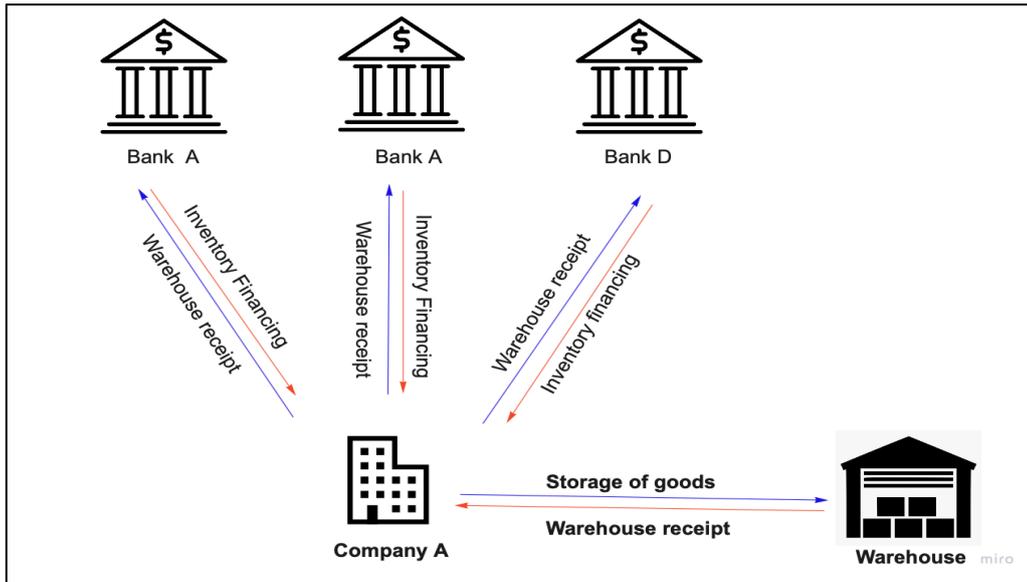
¹ M. Guerar et al. (2020) 'A Fraud-Resilient Blockchain-Based Solution for Invoice Financing', IEE Transactions on Engineering Management, 67(4), p. 1086.



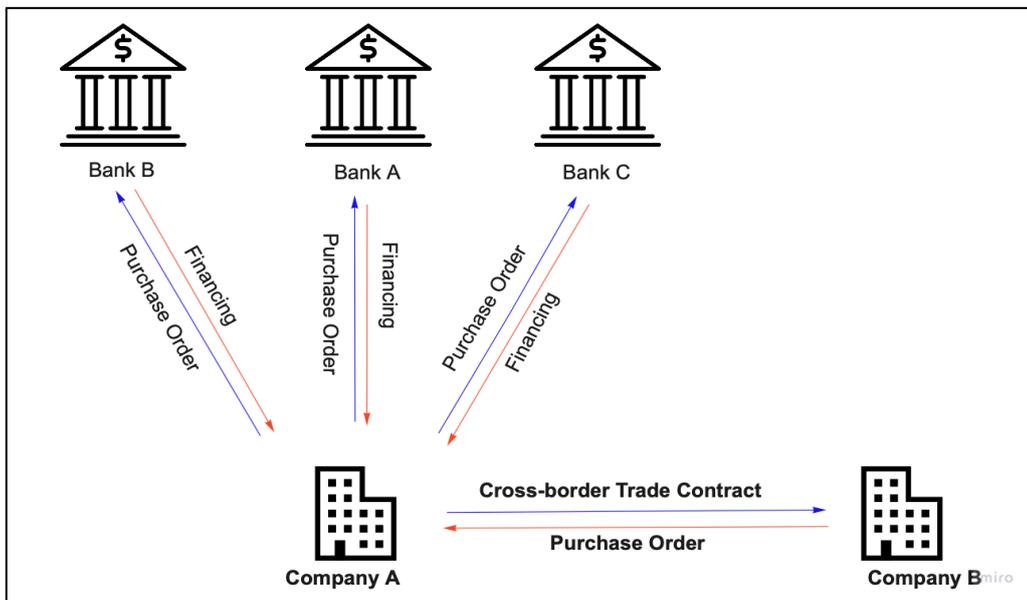
(b) **Duplicate bill of lading:** Company A enters into a cross-border trading contract with Company B. On exporting the goods, Company A raises finance against the bill of lading from Bank C in its own jurisdiction. Since the bill of lading has already been shared with Company B, Company B also takes this bill to Bank D in its own jurisdiction and raises finance against it. To make things more complex, the finance might be raised by Company A or Company B from more than one financial institution in different jurisdictions, which might involve the buyer's country, the seller's country or other countries, resulting in potential losses for financial institutions due to duplicate financing against the same bill of lading.



(c) **Duplicate warehouse receipts:** Company A enters into a cross-border trading contract with Company B. Company A has manufactured the goods and is storing them in the warehouse till the date of shipment. The warehouse has issued the warehouse receipt, which has been used by Company A to secure inventory financing from Bank A. The same warehouse receipt has also been used to secure financing from Bank B, Bank C and Bank D, which all provided inventory financing against the same warehouse receipt.



(d) **Duplicate purchase orders:** Company A enters into a cross-border trading contract with Company B. Company A issues a purchase order to Company B. Company B uses this purchase order to secure pre-shipment financing from Bank A, which is approved and issued by Bank A. Now, Company B uses the same purchase order to obtain financing from Bank B and Bank C: this constitutes duplicate financing fraud.



Financial institutions' ability to detect duplicate financing, both at national and transnational level, is usually limited due to the lack of a joint and unified view of the situation among financial institutions, which makes it possible for perpetrators to obtain financing from multiple financial institutions using the same set of documents. In the 2014 Qindgao fraud case, for instance, a Chinese trading company used duplicate warehouse receipts to raise finance by pledging the same collateral multiple times – a scandal which underlined the risks

faced by banks and trading houses storing commodities.² It was estimated that 13 banks, including Western banks and trading houses, as well as local Asian banks, were affected by this fraud, which cost more than \$3 billion in total raised in loans, letters of credit and bank acceptance bills.³

III. What is the gravity of this issue and what is its impact?

Duplicate financing, which can happen for a variety of reasons, including to raise liquidity, is a hidden problem in trade finance. Numerous similar instances of fraud go undiscovered due to poor detection measures and a lack of collaboration and coordination within the banking industry, as well as with other alternative lenders, making it impossible to determine the exact scale of this issue. According to a recent survey by the International Chamber of Commerce, fraud and litigation involving trade financing have been on the rise over the past few years, including instances of duplicate financing.⁴ One study estimated that between 1% and 2% of invoice financing globally is vulnerable to fraud, totalling to around \$50 billion in fraud each year.⁵ Such fraud is frequently manifested as double financing of the invoice, whereby a supplier who is owed money by a buyer presents the same invoice to various financiers. There can be several reasons for engaging in duplicate financing, including raising liquidity.

Fraud due to duplicate financing of receivables from multiple financiers causes losses of billions of dollars to the financial industry.⁶ Examples of trade and receivable financing fraud from the recent past include a billion dollar lawsuit against a financial institution for financing fictitious receivables⁷ and the loss of hundreds of millions of dollars to various banks as a result of duplicate financing in the Qingdao fraud case (discussed above) and the Hin Leong Trading fraud case. In the latter instance, the company obtained financing from several sources using a variety of financing schemes which had no commercial benefit for the company except creating more liquidity. These schemes included making use of forged paperwork, fictitious inventories, or the sale of the same inventory to multiple parties. It soon became apparent that the same invoices had been allegedly used multiple times to obtain financing. Due to their exposure to the Hin Leong Trading fraud case, a number of major financial institutions have decided to withdraw from the trade and commodity finance market and have placed restrictions on new clients.⁸ In 2020, there was also another trade finance

² Reuters (2018) 'Qindao metals scandal accused handed 23-year jail term' (10 December 2018). Available at: <https://www.reuters.com/article/us-china-metals-fraud-idUSKBN1O91G8> (accessed 1 August 2022).

³ Ibid.

⁴ International Chamber of Commerce (2016) '2016: Rethinking Trade and Finance'. Available at: http://store.iccwbo.org/content/uploaded/pdf/ICC_Global_Trade_and_Finance_Survey_2016.pdf (accessed 1 August 2022).

⁵ P. Crossman (2018) 'Anti-fraud blockchain for invoice financing goes live', *American Banker*, 183(64) 1.

⁶ Ikagi Law (2020) 'Comments to the Abu Dhabi Global Market's Electronic Transactions Regulations' (November 6, 2020) 2020 WLNR 31668864.

⁷ See, Cognizant (2017) 'How Blockchain can revitalize Trade Finance (Part 1)' (August 2017), p. 3. Available at: <https://www.cognizant.com/fr/fr/dotcom/documents/how-blockchain-can-revitalize-trade-finance-part1-codex2766.pdf> (accessed 30 September 2022); D. P. Hellwig and A. Huchzermeier (2019) 'An Industry Study of Blockchain Technology's Impact on Trade Finance' (September 14, 2019), p. 6. Available at SSRN: <https://ssrn.com/abstract=3453767> or <http://dx.doi.org/10.2139/ssrn.3453767>.

⁸ See, J. Luk (2021) 'Swiss banks seek stricter commodity financing standards after huge fraud losses in 2020' (5 November 2021) 2021 WLNR 36502167; J. Basquill (2020) 'Analysis: Hin Leong's "vicious cycle" of trade finance fraud' (*Global Trade Review*, 19 August 2020). Available at: <https://www.gtreview.com/news/asia/analysis-hin-leongs-vicious-cycle-of-trade-finance-fraud/> (accessed 24 August 2022).

scandal involving an energy firm that used the same cargo of crude oil to obtain at least two, but possibly several, lots of financing from multiple banks.⁹

In light of the high risks involved with trade finance, as well as the time and money required to undertake due diligence and fulfil contractual compliance requirements, banks are tending to provide more unfavourable financing terms. Micro, small, and medium-sized businesses (MSMEs), who play an increasingly crucial role in international trade, are particularly challenged by such practices. A recent Asian Development Bank study estimates that the gap in trade finance availability reached \$1.7 trillion in 2020, representing 10% of global trade.¹⁰ It is estimated that financing rejection rates for small and medium-sized enterprises (SMEs) run at 40%, with women-owned SMEs being the hardest hit, with 70% of their applications totally or partially rejected.¹¹ A study by the International Financial Corporation also estimates that 65 million MSMEs in developing countries are credit-constrained.¹² The financing deficit for MSMEs is estimated to be \$5.2 trillion every year, which is equivalent to 1.4 times the current level of global MSME lending.¹³ The size of the trade finance market, which is currently valued at \$4.4 trillion, has been constrained by fraud risks and inefficiencies in international trade, negatively influencing the expansion of global commerce. According to a Deloitte report analysing the Hong Kong market, “almost half of trade transactions in Hong Kong fail to obtain financing due to lack of trust and the potential for loss through fraud.”¹⁴

Disruptions associated with COVID-19 have been widely acknowledged to have worsened this gap, which is projected to continue in the absence of proactive steps. One suggestion for closing the ever-widening trade finance gap has been the digitalisation of trade finance to reduce fraud risks, and to foster efficiency and better coordination with the private sector, as well as obtaining global agreement on uniform standards, procedures, and laws,¹⁵ which are discussed in more detail in the sections below.

IV. What are the challenges in detecting and preventing duplicate financing fraud?

Duplicate financing fraud affects reputable and notable financial institutions, for a variety of reasons, but the difficulties in implementing a sufficient defensive posture are typically

⁹ J. Luk (2021) ‘Swiss banks seek stricter commodity financing standards after huge fraud losses in 2020’ (5 November 2021) 2021 WLNR 36502167. See also, N. Hume et al. (2020) ‘HSBC accuses collapsed oil trader ZenRock of ‘suspicious’ dealings’ (Financial Times, 8 May 2020.). Available at: <https://www.ft.com/content/0579dbde-aab3-4670-9e67-bebeff1edccd> (accessed 13 September 2022).

¹⁰ Asian Development Bank (2021) ‘Global Trade Finance Gap Widened to \$1.7 Trillion in 2020’ (Manilla, 12 October 2021). Available at: <https://www.adb.org/news/global-trade-finance-gap-widened-17-trillion-2020> (accessed 3 August 2022).

¹¹ Asian Development Bank (2021) ‘2021 Trade Finance Gaps, Growth and Jobs Survey’ (No. 192, October 2021). Available at: <https://www.adb.org/sites/default/files/publication/739286/adb-brief-192-trade-finance-gaps-jobs-survey.pdf> (accessed 3 August 2022).

¹² IFC (2017) ‘MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small and Medium Enterprises in Emerging Markets’ (Washington, 2017), p. X. Available at: <https://openknowledge.worldbank.org/handle/10986/28881> (accessed 3 August 2022).

¹³ IFC (2017) ‘MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small and Medium Enterprises in Emerging Markets’ (Washington, 2017), p. IX. Available at: <https://openknowledge.worldbank.org/handle/10986/28881> (accessed 3 August 2022).

¹⁴ Euromoney (2017) ‘Trade finance moves toward digitalisation’ (1 September 2017).

¹⁵ Asian Development Bank (2021) ‘2021 Trade Finance Gaps, Growth and Jobs Survey’ (No. 192, October 2021). Available at: <https://www.adb.org/sites/default/files/publication/739286/adb-brief-192-trade-finance-gaps-jobs-survey.pdf> (accessed 3 August 2022).

caused by outmoded procedures and behaviour, a lack of standardisation, and limitations on how technology can help prevent and mitigate risks.

Some of the key challenges identified by this briefing paper in detecting and preventing duplicate financing fraud by banks include the following:

- a) **Information silos that exist between institutions:** When a document is validated or cross-checked, it is only done within a single bank database or across a single banking network; other banks' financing or payment obligations are not known.¹⁶ Even within the same bank, there is a possibility that, due to a lack of adequate transaction recording and monitoring systems for trade finance, different business lines or departments might not be aware of or able to detect whether a particular trade has been financed earlier. This informational asymmetry is a key challenge in regard to detecting and preventing duplicate financing.
- b) **Privacy regulations:** Banks may be prohibited from sharing their clients' information with other banks by confidentiality and privacy obligations, which are typically part of their contractual, legal, and regulatory obligations. Data protection and privacy regulations differ by country and are one of the most crucial challenges to address when carrying out cross-institution and cross-border collaboration.
- c) **Competition concerns:** In order to safeguard their own interests, banks may also be reluctant to give competitors information about their operations and clientele.
- d) **Inadequate information sharing mechanisms:** Lack of appropriate channels that guarantee information exchange while maintaining client confidentiality and privacy and the protection of companies' interests may present operational issues for banks when sharing information. Banks may encounter a number of difficulties in implementing modern information technology, particularly in trade finance, ranging from the associated expenses to inadequate expertise, professional assistance, and capacity to leverage technical investments over time.

The Wolfsberg Group, ICC and BAFT Trade Finance Principles also point to data privacy and protection controls and inadequate cross-border exchange of information as one of the major obstacles in the effective management of financial crime risks in international trade, for they limit the ability of financial institutions to access the pertinent information required for conducting effective due diligence of the relevant parties.¹⁷ The need for efficient and effective cross-border sharing of information between financial institutions to tackle financial crime has also been highlighted by the Financial Action Task Force (FATF) – the inter-governmental standard-setting body for anti-money laundering and combating financing of terrorism (AML/CFT) – which has stated that “if multiple financial institutions share data and apply advanced analytics, it can reveal trends or potentially suspicious activities that could otherwise go undetected.”¹⁸

¹⁶ Banking News Feed (2020) ‘We’ve joined DBS to lead an industry workgroup to develop Trade Finance Registry pilot to enhance trade transparency’ (6 October 2020). See also, RUSI and FFIS ‘Lessons in private-private financial information sharing to detect and disrupt crime’ (A Survey and Policy Discussion Paper, 25 July 2022).

¹⁷ The Wolfsberg Group, ICC and BAFT Trade Finance Principles (2019 amendment), p. 16.

¹⁸ The FATF (2021) *Stocktake on Data Pooling, Collaborative Analytics and Data Protection* (FATF: Paris, July 2021). Available at: <https://www.fatf-gafi.org/media/fatf/documents/brochuresannualreports/stocktake-data-pooling-collaborative->

V. Are there any solutions for overcoming duplicate financing?

The creation of a central database of all papers via a trade finance platform, which would provide a unified vision, is one approach to solving the problem of duplicate financing. However, as was previously stated, building such a platform presents some significant issues in terms of data protection and confidentiality. Such platforms would also typically be expensive and prone to privacy infringements, data manipulation, and attacks, rendering them unreliable and untrustworthy.¹⁹

However, with the emergence of new technologies over the last few years, this paper believes that, moving forward, one of the possibilities for increasing the security of trade finance while also maintaining confidentiality and privacy is the adoption of new technologies, such as blockchain or cloud computing. With transactions recorded on the blockchain being immutable, it would be possible to verify their integrity and to establish an audit trail.²⁰ The replication of transactions over several nodes in blockchain technology also has the potential to make trade finance platforms more resilient to network attacks.²¹ In a similar manner, utilising cloud computing applications could address any concerns related to data integrity, confidentiality, and security in trade finance. The development of such platforms, whether using blockchain or cloud applications, can be done in one of two ways: either at the national or the global level.

At the national level, initiatives have been taken in the past few years in a few jurisdictions (such as in India, Singapore, and the United Arab Emirates (UAE)) to create a trade finance platform, mainly using distributed ledger technology, to which the financial institutions (including factoring companies) can upload their invoices and other documents for fraud analysis and duplicate financing checks in real time.²² The newly established blockchain trade finance platform in UAE, for instance, has handled invoices worth \$2.72 billion within its first eight months of operation, which has been reported to have a significant impact on mitigating duplicate financing fraud at the national level.²³ Although these national-level initiatives are noteworthy in improving the transparency of financing arrangements and are a key start in identifying and preventing duplicate financing, they might not be suitable for addressing the global scope of the duplicate financing fraud issue. For instance, in international trade transactions, it is possible for financing to be provided to the seller/supplier by the buyer's bank as part of a buyer-led supply chain finance (SCF) programme, and the seller can also obtain financing on the same invoices from a bank in its own country.²⁴ In such instances, it would be difficult to detect duplicate financing by banks if the solution is limited to a national-level trade finance platform.

[analytics-data-protection-handout.pdf](#) (accessed 31 August 2022). For the full report, see: <https://www.fatf-gafi.org/media/fatf/documents/Stocktake-Datapooling-Collaborative-Analytics.pdf> (accessed 31 August 2022).

¹⁹ M. Guerar et al. (2020) 'A Fraud-Resilient Blockchain-Based Solution for Invoice Financing', IEEE Transactions on Engineering Management, 67(4), pp. 1086–1098.

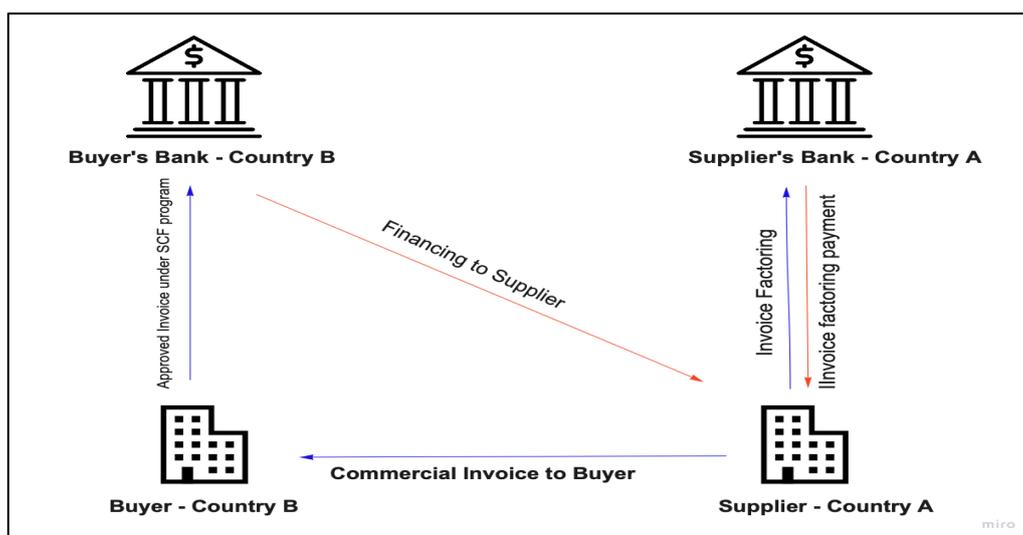
²⁰ S. Kaaru, 'Blockchain could transform trade finance and customer due diligence: EU Report' (The Merkle, 6 July 2018).

²¹ Ibid.

²² See, Trade Arabia (2021) 'UAE Trade Connect crosses AED 10 billion milestone' (21 December 2021).

²³ Ibid.

²⁴ MonetaGo (2021) 'A Global Standardized Approach to Combating Duplicate Financing Fraud in Trade Finance' (whitepaper, June 2021). Available at: <https://www.monetago.com/white-paper> (accessed 30 August 2021).



Source: MonetaGo, 2021

Considering the scale of the problem, this paper thus considers that national-level solutions might prove to be inadequate when applied to international trade, and that a unified global solution that combats duplicate financing fraud in international trade is the most effective way to help resolve this problem.²⁵

Over the past few years, a number of solutions have been developed at a global level to benefit multiple parties, including banks, suppliers, and buyers, involved in trade finance.²⁶ While these solutions are a positive step and allow financiers to better assess and reduce a variety of risks (including duplicate financing), they have certain limitations, which may relate to their scope (e.g., membership or type of trade documents processed), main focus (e.g., primarily to ensure the quick availability of finance, or the automation and optimisation of invoicing and payment processes, or focussing mainly on duplicate invoicing), and functionality (e.g., use of technology),²⁷ which may limit their effectiveness in dealing with the wider issue of duplicate financing.

To help mitigate the risk of duplicate funding in international trade, this paper emphasises the need to create an all-inclusive single, dedicated global platform that banks and other alternative lenders can utilise to access the database of trade transactions financed by other participating lenders worldwide without jeopardising confidentiality. Through such a platform (if it uses distributed ledger technology), financial institutions would be able to register the selected document information or upload physical copies of invoices and other documents to a digital and distributed ledger. To preserve client and commercial confidentiality, key information from each document would be cryptographically hashed to create digital fingerprints, which cannot be reversed.²⁸ These fingerprints would then be sent to the platform, which would serve as a secure, shared data repository for all participating lenders seeking to detect any matches in near real time. If multiple lenders submit the identical document to the network, the system would either reject or flag all duplicates as suspicious

²⁵ Global Trade Review (2021) 'Exclusive: Swift launches double financing fraud pilot with MonetaGo' (12 September 2021).

²⁶ These include, for instance, Trade Information Network (TIN), Electronic Invoice Presentment and Settlement (EIPP), SureComp Invoice Comparison Tool etc.

²⁷ FinTech Futures (2018) 'Blockchain fatigue? A brief look at the Trade Information Network venture' (21 November 2018). Available at: <https://www.fintechfutures.com/2018/11/trade-finance/> (accessed 28 August 2022).

²⁸ Global Trade Review (2021) 'Exclusive: Swift launches double financing fraud pilot with MonetaGo' (12 September 2021).

activity after the first distinct version is marked as financed.²⁹ Such a platform should also allow the system users to pass messages back and forth on blockchain, in order to cross-reference an invoice or other documents before committing to financing them.³⁰ This method would boost confidence and trust among banks and traders alike by preventing duplication of financing by several lenders for the same trade inventory, and also by verifying the integrity of trade financing transactions. Such a platform could also be further developed to investigate the possibility of independent third-party validations of related trade documents (for instance, by customs³¹ or shipping companies) to confirm the legitimacy of the underlying trade that a financial institution finances, as well as the digitalisation of the trade-supporting documents, in order to further enhance the transparency and integrity of the entire trade finance landscape.³² However, in order for such a platform to be operationally effective, broad industry acceptance and participation, and an open ecosystem, are essential preconditions, which apply to all platforms.

While blockchain technology would certainly be effective in dealing with a number of issues and concerns related to trade finance, there have been some recent advances in the use of another technology i.e., cloud computing, to improving the process's affordability, usability, and ability to scale to the issue of duplicate financing fraud.³³ Compared to hosting and setting a blockchain node, cloud computing is considered to be less complex, needing less resources and a lower level of expertise from financial institutions, and more scalable to the global trade finance industry.³⁴ Additionally, it is believed that cloud computing provides all the advantages of blockchain technology, such as data integrity and confidentiality, while better aligning with the standards of financial regulators around the world in areas like data localisation and privacy.³⁵ On the issue of data protection and privacy, another technology that is emerging in the field is 'homomorphic encryption', which is reported to allow more increased privacy and confidentiality to financiers when using a global trade finance platform, while also making the data machine readable in order to understand various risk indicators, transactions patterns, and other critical information that is relevant for lending decisions.³⁶

The digitalisation of trade finance and the use of blockchain, cloud computing, or other technologies to prevent duplicate financing is not, however, without its challenges. These solutions require changes in legislation, and global standardisation of the processes and procedures involved. Currently, the major challenge for digital negotiable instruments is the absence of domestic legal frameworks recognising them. However, there have recently been some developments on this front. The United Nations Committee for International Trade Law (UNCITRAL) has drafted a model legislation in this area. The International Trade and Forfeiting

²⁹ Ibid. See also, Global Trade Review (2022) 'Surecomp fights double financing fraud with invoice checking tool' (13 April 2022).

³⁰ Ibid.

³¹ This has been done in Singapore, with Singapore Customs being involved in verifying the authenticity of trade documents.

³² G. Wright (2016) 'Blockchain Voyages of Discovery' *Global Finance* 30(4), p. 54 (1 April 2016).

³³ E. Wragg (2022) 'Exclusive: MonetaGo ditches blockchain amid scalability concerns' (*Global Trade Review*, 6 August 2022). Available at: <https://www.gtreview.com/news/fintech/exclusive-monetago-ditches-blockchain-amid-scalability-concerns/> (accessed 27 August 2022).

³⁴ See, D. P. Hellwig and A. Huchzermeier (2019) 'An Industry Study of Blockchain Technology's Impact on Trade Finance' (September 14, 2019), p. 6. Available at SSRN: <https://ssrn.com/abstract=3453767> or <http://dx.doi.org/10.2139/ssrn.3453767>.

³⁵ Ibid.

³⁶ Global Trade Review (2022) 'Exclusive: Duality Technologies enters trade finance fraud prevention' (1 June 2022).

Association has urged the UK government to accept digital negotiable instruments, bills of exchange, and promissory notes, and has also unveiled a project to digitise trade finance documents.³⁷ Even the International Chamber of Commerce has urged countries to switch to paperless trading in light of COVID-19,³⁸ and recently launched global initiatives, such as the ICC Centre for Digital Trade and Innovation (C4DTI)³⁹ and the ICC Digital Standards Initiative,⁴⁰ to accelerate the digitalisation of global trade by promoting the implementation of open systems based on unified international standards. The Model Law on Electronic Transferable Records (MLETR) has not been widely implemented yet, but now that certain countries and markets, including Bahrain, Singapore, and the Abu Dhabi General Market, have implemented it, other countries are taking notice.

To meaningfully move digitalisation forward, global standards and protocols are also required. If international norms and conventions are not in place, it may lead to legal conflicts, for the users of digitalised platforms are spread across several jurisdictions. Global standards would drive interoperability between various platforms and between different components of the trade ecosystem. Beyond the anticipated increases in efficiency and lower entry hurdles for SMEs, the metadata collected using such platforms could also reveal and help remove challenges to bridging finance gaps, while strengthening supply chains and making them more resilient to shock. While emphasising the need for clear data information exchange protocols, the Wolfsberg Group, ICC and BAFT Trade Finance Principles recommended that:

*in order to support cross border, enterprise wide exchange of information and data, cooperation and joint action is required ... to ensure that laws relating to data protection data privacy, the duty of confidentiality and any other relevant legislation do not impede the exchange of information in support of [financial crime risk] management.*⁴¹

Digitalisation and the use of new technologies would allow banks to advance towards more secure and faster financing of trade by also overcoming some of the other difficulties and risks associated with trade finance, such as forged paper-based bills of exchange and invoices.⁴² Blockchain technology enables the creation of totally digital bills of exchange, promissory

³⁷ Global Trade Review (2020) 'ITFA launches digital negotiable instruments initiative, presses UK government to update trade law' (29 April 2020). Available at: <https://www.gtreview.com/news/europe/itfa-launches-digital-negotiable-instruments-initiative-presses-uk-government-to-update-trade-law/> (accessed 2 August 2022).

³⁸ Global Trade Review (2020) 'Governments urged to lift legal barriers to digital trade to mitigate Covid-19 impact' (22 April 2020). Available at: <https://www.gtreview.com/news/global/governments-urged-to-lift-legal-barriers-to-digital-trade-to-mitigate-covid-19-impact/> (accessed 2 August 2022).

³⁹ See ICC Centre for Digital Trade and Innovation (C4DTI). Available at: https://cdn.shopify.com/s/files/1/2992/1976/files/ICC_Centre_for_Digital_Trade_Brochure.pdf?v=1649372944 (accessed 13 September 2022).

⁴⁰ See, ICC Digital Standards Initiative. Available at: <https://www.dsi.iccwbo.org> (accessed 13 September 2022).

⁴¹ The Wolfsberg Group, ICC and BAFT Trade Finance Principles (2019 amendment), p. 17. See also, RUSI and FFIS 'Lessons in private-private financial information sharing to detect and disrupt crime' (A Survey and Policy Discussion Paper, 25 July 2022), p. 9.

⁴² Some other recent scandals involving forged paper-based trading documents include the Agritrade International and Hontop trade financing frauds. See, J. Basquill (2021) 'Agritrade executive charged by police over deceptive bills of lading' (Global Trade Review, 22 September 2021). Available at: <https://www.gtreview.com/news/asia/agritrade-executive-charged-by-police-over-deceptive-bills-of-lading/> (accessed 13 September 2022); J. Basquill (2020) 'Singapore oil trader Hontop faces fraud claims: What went wrong?' (Global Trade Review, 22 July 2020). Available at: <https://www.gtreview.com/news/asia/singapore-oil-trader-hontop-faces-fraud-claims-what-went-wrong/> (accessed 13 September 2022).

notes, and other negotiable instruments that are equivalent to financial contracts, thereby blocking such fraudulent tactics and minimising inefficiencies in the process. A few initiatives in this regard have already been implemented: for instance, the establishment of Singapore's TradeTrust, which is an interoperability framework that connects platforms to exchange digital trade documentation by using public blockchain technology.⁴³ Cloud-based solutions have also recently been developed to create, manage, and exchange digital trade finance documents while complying with MLETR.⁴⁴ One bank recently conducted the UK's first digital promissory note pilot transaction utilising a cloud application.⁴⁵

VI. Conclusion

Duplicate financing occurs for many reasons. Although it is difficult to determine the exact extent of the problem, its gravity and impact on the financial market as a whole, as seen in recent scandals, and on the real economy, in terms of its contribution to the trade finance gap, is apparent. Historically, financial institutions have been unable to effectively detect and prevent this issue due to various challenges, including outmoded procedures and behaviour, limited technology, privacy regulations, competition concerns, and inadequate information sharing mechanisms. However, with the advent of new technologies, including blockchain and cloud applications, solutions have emerged for tackling this issue globally while preserving the required client and commercial confidentiality.

To overcome the problem of duplicate financing fraud, this paper highlights the importance of an industry approach whereby industry players collaborate and explore new ideas, while using new technologies, to build a solution(s) that will benefit the industry as a whole, including banks and other alternative lenders, and greatly improve their trade finance experience. The paper emphasises the need to establish a unified trade finance platform that is interoperable between markets, whether established using a distributed ledger technology, a cloud application or another technology, to effectively deal with the risk of duplicate financing. However, it is important to note that the scale of the solution should match the scale of the problem, i.e., the volume of data being collected and analysed, and that it should not place an undue burden on the end-users as regards its usability, in order to facilitate its easy adoption. Such a solution or solutions will increase the financial sector's ability to sustain commodity-based lending, which will help narrow the trade finance gap.

⁴³ V. Shiao (2020) 'Singapore takes lead to boost transparency in trade finance' (Business Times, 19 October 2020). See also TRPC (2020) 'Australia- Singapore Digital Economy Cooperation on Standards' (September 2020). Available at: <https://www.mti.gov.sg/-/media/MTI/Microsites/DEAs/Singapore-Australia-Digital-Economy-Agreement/SG-AU-Standards-for-Digital-Trade.pdf> (accessed 13 September 2022).

⁴⁴ E. Wragg (2022) 'Surecomp links up with Enigio on digital trade documents' (Global Trade Review, 23 February 2022). Available at: <https://www.gtreview.com/news/fintech/surecomp-links-up-with-enigio-on-digital-trade-documents/> (accessed 28 August 2022).

⁴⁵ F. Thompson (2022) 'Lloyds Bank completes first UK digital promissory note pilot' (Global Trade Review, 30 August 2022). Available at: <https://www.gtreview.com/news/fintech/lloyds-bank-completes-first-uk-digital-promissory-note-pilot/> (accessed 31 August 2022). The UK has recently adopted draft legislation on Electronic Trade Documents giving promissory notes and other electronic trade documents the same legal standing as their paper-based counterparts. For more details, see, E. Wragg (2022) 'Law Commission publishes draft electronic trade documents legislation' (Global Trade Review, 22 March 2022). Available at: <https://www.gtreview.com/news/europe/law-commission-publishes-draft-electronic-trade-documents-legislation/> (accessed 31 August 2022).

