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#### **Research Report**

Harnessing open account trade – A major enabler for illicit financial flows from developing countries: Can blockchain technology come to the rescue? Will the African Continental Free Trade Area leverage its Digital Trade Protocol?

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Harnessing Open Account Trade—A Major Enabler for Illicit Financial Flows from Developing Countries



#### RESEARCH PAPER

#### 220

# HARNESSING OPEN ACCOUNT TRADE— A MAJOR ENABLER FOR ILLICIT FINANCIAL FLOWS FROM DEVELOPING COUNTRIES

CAN BLOCKCHAIN TECHNOLOGY COME TO THE RESCUE? WILL THE AFRICAN CONTINENTAL FREE TRADE AREA LEVERAGE ITS DIGITAL TRADE PROTOCOL?

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**SOUTH CENTRE** 

**25 JUNE 2025** 

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#### **ABSTRACT**

The current geopolitical landscape has made domestic resource mobilization an even more important imperative for developing countries. In this context, it is more urgent than ever to combat illicit financial flows (IFFs) whose staggering amount from developing countries has outstripped the combined sum of official development assistance (ODA) and foreign direct investment (FDI) going into the developing world. The IFFs from the financial channel is significant, but the greater proportion of IFFs actually stems from trade channels rather than from financial channels. It is particularly concerning that the flexibility and legitimacy of international trade have been exploited to cover IFFs. Trade mis-invoicing is the largest component of IFFs from developing countries. A major reason for trade being used to undertake illicit, fraudulent or criminal activities is because 80%-85% of the more than US\$ 24 trillion international trade is conducted via open account trade (OAT), which has minimum scrutiny as it is conducted on a bilateral basis between the importer and exporter, not transparent and with minimal involvement of the financial institutions and customs authorities. OAT payment does not require documents to prove quality, quantity and other information about the product being shipped and is made through automatic payment systems which lack the oversight provided by any third party. OAT gives trade mis-invoicing great ease, flexibility, minimal cost and minimal risk. Therefore, if the world is serious about combatting IFFs, it is urgent and imperative to close loopholes in the OAT for IFFs, making it transparent, trackable and involving third party monitoring and scrutiny. The functionalities and features of Blockchain technology (BCT), though its implementation is still nascent, can be a good candidate to make OAT more modern, transparent to regulators, traceable, more efficient and above all minimize IFFs. The goals of the African Continental Free Trade Area (AfCFTA)'s Digital Trade Protocol (DTP) include boosting intra-African trade through unifying and harmonizing regulatory framework for Africa's digital economy and regional trade, promoting cross-border data flows and paperless trade, and enhancing cybersecurity measures. The exploration of Blockchain adoption to reduce OAT's risks for IFFs and make trade more effective aligns well with DTP's goals.

Dans le contexte géopolitique actuel la mobilisation des ressources nationales et la lutte contre les flux financiers illicites en provenance des pays en développement, dont le montant est tel qu'il dépasse celui de l'aide publique au développement et des investissements directs étrangers dans ces pays, constituent plus que jamais une urgence et un enjeu majeur pour les pays en développement. Si une grande partie des flux financiers illicites concerne des activités financières, la majorité provient en réalité d'activités commerciales. Il est particulièrement inquiétant que la flexibilité du commerce international et sa légitimité puissent être exploitées pour permettre des mouvements illégaux d'argent ou de capitaux. La fausse facturation commerciale constitue l'une des plus importantes composantes des flux financiers illicites en provenance des pays en développement. Le recours à des pratiques commerciales illicites, frauduleuses ou criminelles s'explique en grande partie par le fait que 80 à 85 % des activités commerciales, qui représentent plus de 24 000 milliards de dollars à l'échelle internationale, reposent sur des transactions à compte ouvert, qui sont soumises à un contrôle minimal puisqu'elles sont effectuées sur une base bilatérale entre l'importateur et l'exportateur, demeurent opaques et que les institutions financières et les autorités douanières n'y participent que très peu. Aucun document à même de prouver la qualité, la quantité et d'autres informations sur le produit expédié n'est exigé dans le cadre des transactions à compte ouvert. qui sont effectuées via des systèmes de paiement automatiques dans lesquels aucun mécanisme de surveillance par une tierce partie n'est prévu. Ces transactions, qui offrent une grande flexibilité et représentent un coût et un risque faibles, facilitent la fausse facturation commerciale. Par conséquent, si le monde veut vraiment lutter contre les flux financiers illicites, il est urgent et impératif de combler les lacunes liées aux transactions à compte ouvert en les

rendant transparentes, traçables et en veillant à ce qu'elles puissent être examinées et contrôlées par une tierce partie. Les fonctionnalités et les caractéristiques de la technologie Blockchain, dont la mise en œuvre n'en est qu'à ses prémices, apparaissent comme un bon moyen d'améliorer ce type de transactions et de faire en sorte qu'elles soient plus transparentes pour les régulateurs, traçables, plus efficaces, et surtout de réduire les flux financiers illicites. La consolidation des échanges commerciaux au sein du continent africain par l'unification et l'harmonisation du cadre réglementaire pour l'économie numérique, la promotion des flux de données transfrontaliers et du commerce sans papier, ainsi que le renforcement des mesures de cybersécurité sont parmi les objectifs fixés par le Protocole sur le commerce numérique adopté par la Zone de libre-échange continentale africaine (ZLECA). L'exploration des possibilités offertes par la blockchain et son adoption en vue de réduire les flux financiers illicites et les transactions à compte ouvert qui les favorisent et ainsi de rendre le commerce plus efficace vont dans le sens des objectifs visés par le Protocole.

El actual panorama geopolítico ha convertido la movilización de recursos internos en un imperativo aún más importante para los países en desarrollo. En este contexto, es más urgente que nunca combatir los flujos financieros ilícitos (FFI), cuya asombrosa cantidad procedente de los países en desarrollo ha superado la suma combinada de la ayuda oficial al desarrollo (AOD) y la inversión extranjera directa (IED) que se destina al mundo en desarrollo. Si bien los FFI provenientes del canal financiero son significativos, la mayor proporción de estos flujos ilícitos en realidad se origina en los canales comerciales, más que en los financieros. Resulta especialmente preocupante que la flexibilidad y la legitimidad del comercio internacional se hayan aprovechado para encubrir los FFI. La facturación comercial fraudulenta es el principal componente de los FFI de los países en desarrollo. Una de las principales razones por las que el comercio se utiliza para llevar a cabo actividades ilícitas, fraudulentas o delictivas es porque el 80%-85% de los más de 24 billones de dólares de comercio internacional se realiza a través del comercio de cuenta abierta (OAT), el cual está sujeto a una supervisión mínima, ya que se lleva a cabo de manera bilateral entre el importador y el exportador, sin transparencia y con una participación muy limitada de las instituciones financieras y las autoridades aduaneras. El pago mediante OAT no requiere documentos que prueben la calidad, cantidad u otra información sobre el producto enviado y se realiza a través de sistemas automáticos de pago que carecen de la supervisión de un tercero. El sistema OAT permite una gran facilidad, flexibilidad, bajo costo y mínimo riesgo para la facturación comercial fraudulenta. Por lo tanto, si el mundo se toma en serio el combate contra los FFI. resulta urgente e imprescindible cerrar las brechas del OAT para los flujos ilícitos, haciéndolo transparente, rastreable y sujeto a la supervisión de terceros. Las funcionalidades y características de la tecnología Blockchain (BCT), aunque su implementación aún está en una etapa incipiente, pueden ser una buena opción para modernizar el OAT, hacerlo más transparente para los reguladores, rastreable, más eficiente y, sobre todo, minimizar los FFI. Los objetivos del Protocolo de Comercio Digital (DTP) de la Zona de Libre Comercio Continental Africana (AfCFTA) incluyen impulsar el comercio intraafricano mediante la unificación y armonización del marco regulatorio para la economía digital y el comercio regional de África, promover los flujos transfronterizos de datos y el comercio sin papel, y fortalecer las medidas de ciberseguridad. La exploración del uso de Blockchain para reducir los riesgos del OAT relacionados con los FFI y hacer el comercio más efectivo está bien alineada con los objetivos del DTP.

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#### **INTRODUCTION**

The current geopolitical landscape has made domestic resource mobilization an even more important imperative for developing countries to maintain economic stability, finance climate action and navigate in an uncertain world. The main reason is that major sources of external financing for many developing countries including official development assistance (ODA), foreign direct investment (FDI), export earnings and other external resources are declining, especially since the beginning of 2025.

ODA and development finance are shrinking dramatically and unprecedentedly as a response to government policies of some major developed governments. Some newly announced policies like large increases in military expenditure have not yet passed through to actual cuts in ODA by all related countries yet, but will come. Major developed countries are competing for FDI with sticks-and-carrots policies which will result in diverting FDI from developing countries. With the current raging tariff war and resulting uncertainties, the export and other foreign exchange earnings of developing countries are expected to plunge. The 2025 World Economic Outlook by the International Monetary Fund (IMF) has forecast that, with United States effective tariffs at the highest level for more than a century, world trade growth would be cut in half in 2025 to reflect a "reset" of the global trading system.<sup>2</sup>

In this context, it is more urgent than ever to combat illicit financial flows (IFFs) whose staggering amount from developing countries has outstripped the combined sum of ODA and FDI going into the developing world and exceeded the external debt servicing cost.<sup>3</sup>

IFFs are a massive drain of revenue and domestic resources as a whole from developing countries, reducing domestic investment capacity, threatening the strategic, political and economic interests of countries and undermining public trust in governments and the financial system. IFFs often involve illegal activities like money laundering and tax evasion, but they also encompass legal but abrasive practices like tax avoidance and Base Erosion and Profit Shifting (BEPS) which take advantage of gaps in the international and domestic tax systems. Multi-national companies, in particular, utilise highly trained lawyers to strategically exploit tax and trade "loopholes" to legally shift profits to avoid tax in host jurisdictions.

Given their hidden nature, IFFs are difficult to trace and quantify. Consequently, there is a chronic lack of data and data consistency. However, the report of the High Level Panel on Illicit Financial Flows from Africa published in 2015, also known as the Mbeki report, estimated that Africa alone lost over \$1 trillion to IFFs over the previous 50 years.<sup>4</sup> The amount has been going up since then, owing to increase in international trade and lack of effectiveness in curbing IFFs. In 2020, the United Nations Trade and Development (UNCTAD) estimated that

<sup>&</sup>lt;sup>2</sup> Pierre-Olivier Gourinchas, "The Global Economy Enters a New Era", IMF Blog, 22 April 2025.

<sup>&</sup>lt;sup>3</sup> Organisation for Economic Co-operation and Development (OECD), *Global Outlook on Financing for Sustainable Development 2025* (Paris); Paul Akiwumi, "Curbing illicit financial flows to finance sustainable development in Africa", UNCTAD News, 21 Oct. 2020. Available from <a href="https://unctad.org/news/curbing-illicit-financial-flows-finance-sustainable-development-africa">https://unctad.org/news/curbing-illicit-financial-flows-finance-sustainable-development-africa</a>; Olufunmilola Olabode, "Symposium on IFF: Illicit Financial Flows: An Impediment to Africa's Sustainable Development Introduction", Afronomicslaw, 10 April 2024. Available from

 $<sup>\</sup>underline{\text{https://www.afronomicslaw.org/category/analysis/symposium-iff-illicit-financial-flows-impediment-africas-} \underline{\text{sustainable-0}}.$ 

<sup>&</sup>lt;sup>4</sup> Illicit Financial Flows, Report of the High Level Panel on Illicit Financial Flows from Africa, commissioned by African Union and United Nations Economic Commission of Africa (2015).

the African continent was losing \$86.6 billion per year to IFFs. <sup>5</sup> A World Bank economist estimated that IFFs are of the order of US\$1–1.5 trillion a year globally<sup>6</sup>.

The IFFs from the financial channel is significant, but the greater proportion of IFFs actually stems from trade channels rather than that from financial channels (which probably account for a slightly smaller share of overall IFFs than trade related IFFs). It is particularly concerning that the flexibility and legitimacy of international trade have been exploited to disquise the origin of illicitly transferred money stemming from corruption and embezzlement, tax evasion and avoidance, money laundering, which is called trade-based money laundering (TBML) whose aim is not to move goods and services but to transfer money illegally or illicitly under the cover of trade. The amount of money that is laundered through trade-based activities globally, each year, is valued at US\$2.2 trillion<sup>7</sup>. There is also part of trade related IFFs whose aim is to trade but also to engage in illicit activities to get windfall money.8

It has been estimated that illicit commercial activities, which are dominated by trade related activities, account for approximately 65-70% of total illicit financial flows globally. 9 Trade misinvoicing, a major form of illicit commercial activity, is the largest component of IFFs from developing countries. For Africa, as much as 50-60 per cent of IFFs are generated via trade mispricing and more than half of trade-related IFFs stem from the extractive sector. 10

A major reason for trade being used for undertaking illicit, fraudulent or criminal activities is because 80%11-85%12 of the more than US\$ 24 trillion international trade13 is conducted via open account trade (OAT)<sup>14</sup>, which has minimum scrutiny as it is conducted on a bilateral basis between the importer and exporter, not transparent to outsiders and with minimal involvement of the financial institutions and customs authorities. OAT payment does not require documents to prove quality, quantity and other information about the product being shipped and is made through automatic payment systems which lack the oversight provided by financial institutions in other payment methods, making it extremely susceptible to trade mis-invoicing which is one of the primary methods of trade-based money laundering money for illegal transfer to another country. 15 Because it is easy to hide trails of transfer of financing across national borders, "Open account trade is the most vulnerable to TBML"16. Multinational companies evade taxes in countries where they operate, especially in developing countries, through trade mis-invoicing via OAT, among other schemes.

<sup>&</sup>lt;sup>5</sup> United Nations Trade and Development (UNCTAD), Economic Development in Africa Report 2020, Tackling Illicit Financial Flows for Sustainable Development in Africa (Geneva).

<sup>&</sup>lt;sup>6</sup> Matthew Collin, "Illicit Financial Flows: Concepts, Measurement, and Evidence" (World Bank, 2019). Available from https://documents1.worldbank.org/curated/en/409341624542914243/pdf/Illicit-Financial-Flows-Concepts-

Measurement-and-Evidence.pdf.

7 Napier AI, "All about trade based money laundering", 1 February 2023. Available from https://www.napier.ai/post/trade-based-money-laundering.

Financial Action Task Force – Egmont Group, Trade-Based Money Laundering (Paris, 2020), p. 12.

<sup>&</sup>lt;sup>9</sup> Dev Kar, "Illicit Financial Flows from the Least Developed Countries: 1990-2008", Discussion Paper (New York, UNDP, 2011).

<sup>&</sup>lt;sup>10</sup> United Nations Economic Commission for Africa (UNECA) and African Minerals Development Centre, Impact of illicit financial flows on domestic resource mobilization: optimizing revenues from the mineral sector in Africa

<sup>(</sup>Addis Ababa, 2017).

11 See: https://www.gao.gov/assets/gao-20-314r.pdf; https://www.gtreview.com/supplements/gtr-scf-2021/modernising-open-account-trades/

<sup>12</sup> Global Trade Review, "Modernising open account trades", 12 August 2021.

<sup>&</sup>lt;sup>13</sup> World Trade Organization (WTO), Global Trade Outlook and Statistics, April 2025. Available from https://www.wto.org/english/res\_e/publications\_e/trade\_outlook25\_e.htm. 

14 Global Trade Review, "Modernising open account trades".

<sup>&</sup>lt;sup>15</sup> World Customs Organization, *Illicit Financial Flows via Trade Mis-invoicing* (Brussels, 2018). Available from https://www.wcoomd.org/en/media/newsroom/2018/november/wco-publishes-report-on-illicit-financial-flows-viatrade-mis-invoicing.aspx.

<sup>&</sup>lt;sup>16</sup> Financial Action Task Force – Egmont Group, *Trade-Based Money Laundering*.

Therefore, if the world is serious about combatting IFFs, it is urgent and imperative to close loopholes in OAT for IFFs, making it transparent, trackable and involving third party monitoring and scrutiny. The functionalities and features of Blockchain technology (BCT), though its implementation is still nascent, can be a good candidate to make OAT more modern, transparent to regulators, traceable, more efficient and above all minimize IFFs. Modernizing and reforming OAT can drastically reduce criminal and fraudulent activities in international trade, increase efficiency and reduce cost in trade. Though this would incur costs to countries for establishing the required ecosystem and meeting technical requirements, compared with the revenues that would be generated by curbing IFFs, the cost would be minimal. To create the needed ecosystem would require the full support of the government. As open account traders already have access to Internet and have been using modern technology to varying degrees to conduct their business, there is greater likelihood for them to be encouraged to use government or industry sponsored modernized trade finance mechanisms which may contribute to significantly reduce IFFs.

Since 2016, the Group of Twenty (G20) leaders have committed to galvanising action to reduce illicit financial flows, as set out in Sustainable Development Goal (SDG) target 16.4. The G20 Leaders' Communique (Hangzhou Summit, 4 - 5 September 2016) states that, "We will continue our work on addressing cross-border financial flows derived from illicit activities, including deliberate trade mis-invoicing, which hampers the mobilization of domestic resources for development". The World Customs Organization's report 17 prepared at the request of G20 clearly confirms, after undertaking "several quantitative analytical models illustrating the significance of IFFs/Trade mis-invoicing, (...) that the existence of IFFs/Trade mis-invoicing is indisputable and that the attention of policymakers and other stakeholders should move beyond 'nebulous concerns' to the delivery of 'concrete actions' in the fight against IFFs/Trade mis-invoicing". The current South African G20 Presidency has continued to work on the issue and earmarked several concrete high-level deliverables on combatting IFFs.

This paper will explain in the first section OAT and its relationship with IFFs and examine how and why OAT can be easily used to cover IFFs. Section 2 highlights that despite its inherent shortcomings in terms of transparency and monitoring, OAT has been surging as a dominant trade financing mode. Section 3 explores the potential of using blockchain technology for combatting IFFs and revolutionizing trade payment systems. Section 4 focuses on the need for an enabling ecosystem for adopting blockchain technology. Section 5 explores the potential to leverage on the African Continental Free Trade Agreement (AfCFTA)'s Digital Trade Protocol to lead the adoption of BCT for closing loopholes of OAT and fight against IFFs in Africa. Finally, some concluding views and recommendations are given.

<sup>&</sup>lt;sup>17</sup> World Customs Organization, *Illicit Financial Flows via Trade Mis-invoicing*.

#### I. OPEN ACCOUNT TRADE AND ITS RELATIONSHIP WITH IFFS

There is no generally agreed definition for IFFs. According to the United Nations, IFFs are "[f]inancial flows that are illicit in origin, transfer or use, that reflect an exchange of value and that cross country borders." <sup>18</sup>

IFFs are composed of different illegal and criminal activities including tax evasion, money laundering, corruption, bribery, terrorism financing, etc. IFFs also include activities that technically do not break the law but are considered unethical or abusive including tax avoidance, trade mis-invoicing and BEPS,

As noted, OAT is fertile soil for IFFs as it is vulnerable to misuse and hence is a target for those seeking to exploit gaps in financial and trade oversight. OAT is a fragmented and tangled system with significant lack of standards and interoperability. This gives trade mis-invoicing great ease, flexibility, minimal cost and minimal risk. There is no doubt that, with OAT, illegally sourced money and activities can be mixed easily with proceeds from legitimate businesses. Trade mis-invoicing is one of the major ways to disguise and make life complex for regulating authorities to trace and track suspicious IFF activities, especially when there is a huge lack of standardised data in international trading as a whole, and IFFs in particular.

OAT has increasingly been exploited as a conduit for nearly all forms of IFFs.

#### 1.1. Inherent shortcomings of OAT enable massive IFFs

According to the United Nation's Trade Facilitation Implementation Guide, "open account transaction is a sale where the goods are shipped and delivered before payment is due." <sup>19</sup>

Naturally, the dominant part of exporters and importers engaging in OAT are *bona fide* international traders who use open account trade because it is faster and cheaper. However, OAT may be a major driver of the high prevalence of illicit financial flows in international trade.<sup>20</sup> The following two shortcomings of OAT determine that it can be conveniently used to cover up IFFs:

#### 1.1.1 Lack of transparency and third party screening lead to trade mis-invoicing

OAT is widely recognized as a significant enabler of trade mis-invoicing and IFFs. OAT has almost no third party or government screening and verification of the documents underlying the transactions such as an invoice or shipping documents. OAT normally starts with the importer and exporter negotiating the terms of transaction, then the shipment of goods or delivery of services is made after the two parties reach agreement, and prior to payment, which is due normally within 30 to 90 days. Goods are shipped together with invoice, purchase order, and shipping documents, which means documents are sent directly between buyer and seller. There's little chance for customs authorities or regulators to spot inconsistencies. OAT is also called inter-company credit which means it is not intermediated by financial institutions as when the exporter directly extends credit to the importer. Financial institutions do not provide financing, and thus cannot monitor or verify OAT transactions either. That's

<sup>&</sup>lt;sup>18</sup> UNCTAD/United Nations Office on Drugs and Crime (UNODC), "Conceptual Framework for the Statistical Measurement of Illicit Financial Flows" (Geneva; Vienna, 2020).

<sup>&</sup>lt;sup>19</sup> United Nations Trade Facilitation Implementation Guide. Available from <a href="https://www.unsdqlearn.org/resources/the-united-nations-trade-facilitation-implementation-quide/">https://www.unsdqlearn.org/resources/the-united-nations-trade-facilitation-implementation-quide/</a>.

<sup>&</sup>lt;sup>20</sup> Gilles Carbonnier and Rahul Mehrotra, "Measuring Illicit Financial Flows: New Data and Methods" *International Development Policy*, 27 May 2024; Central Bank of Bahrain, Trade Based Money Laundering: Guidance for Financial Institutions (February 2023); U.S. Government Accountability Office, 2017.

why OAT belongs to the non-documented trade transactions. When discussing the risks and shortcomings of OAT, the focus is almost always on the credit risk of exporters, as non-payment by importers could occur. There are various tools which can be used to minimize the credit risk, including trade credit insurance and factoring (a financial transaction where an exporter sells its accounts invoices to a third-party at a discount). Besides, criminals scheming to illegally transfer money across the border would normally opt for bypassing intermediaries such as banks and insurance companies. A major risk for OAT is that it is the primary channel for trade mis-invoicing owing to OAT's lack of transparency and lack of third party screening. As OAT's transactions are bilateral and have little supervision or monitoring, OAT enables falsified invoices or shipping documents and can easily cover up mis-invoicing in all forms. OAT is based on the trust between the importer and exporter, but individuals and criminal institutions such as drug trafficking organizations who collude for wrongdoing have abused OAT to conduct illegal activities.<sup>21</sup>

Trade mis-invoicing is the core mechanism and largest component of illicit commercial activities and the largest component of measurable IFFs<sup>22</sup>. According to Global Financial Integrity (GFI), an average of 87% of illicit financial outflows from developing countries between 2005 and 2014 were due to trade mis-invoicing.<sup>23</sup> Though there are debates and different views about how to calculate trade mis-invoicing, all agree that the amount of trade mis-invoicing induced IFFs is staggering and OAT is a dominant enabler for it. The United Nations Economic Commission of Africa (UNECA) has pointed out that trade mis-invoicing constitutes a major form of IFFs from African countries. According to UNCTAD<sup>24</sup>, each year trade mis-invoicing in Africa would amount to between \$30 and \$52 billion, and occupies a significant share of the total \$86.6 billion of the African IFFs. A large part of this is relating to critical minerals exploitation and trading, for which transnational corporation (TNCs) have been reported to have practiced transfer pricing extensively.

Trade mis-invoicing refers to deliberate falsification or unintentionally misreporting of the value, quantity, or type of goods or services on invoices during cross-border trade. Trade misinvoicing includes over-pricing or under-pricing of the declared imports or exports, for various purposes. This allows money to be moved across borders illicitly. For example, over-invoicing of imports allows companies to inflate costs and reduce taxable profits; while under-invoicing of exports allows firms to hide revenue and avoid income or export taxes. For OAT, financial and regulatory institutions have almost no information about the exporters, who do not need to show their presence to financial institutions. Exporters are not required to be physically present to secure payment or participate in the financial transaction.<sup>25</sup> Money laundering could be undertaken by disguising the real people behind the deal, through complex crossborder trade deals and falsified trade documents to shift money. Criminal syndicates can use mis-invoiced OAT shipments to disguise proceeds from drugs and weapons trafficking. Trade mis-invoicing is a convenient mechanism to cover or facilitate almost all the criminal and illegal activities under IFFs as mis-invoicing includes falsifying the value, quantity, or type of goods and services in international trade transactions. Multinational enterprises (MNEs) can manipulate prices of cross-border transactions between related parties to transfer prices to artificially shift profits from high-tax jurisdictions to low- or no-tax jurisdictions. For instance, affiliates in high-tax countries import goods and services via OAT at much higher prices from firms in low-tax countries. Corrupted crooks can conspire with other companies and award contracts to the allied companies which overprice exports via OAT for the corrupted crook to share the money via offshore entities posing as "importers".

<sup>&</sup>lt;sup>21</sup> U.S. Government Accountability Office, *Trade-Based Money Laundering* (April 2020).

<sup>&</sup>lt;sup>22</sup> Global Financial Integrity, *Trade-Related Illicit Financial Flows in 134 Developing Countries, 2009 – 2018* (2021).

<sup>&</sup>lt;sup>23</sup> Global Financial Integrity, *Illicit Financial Flows to and from Developing Countries*, 2005-2014 (2017).

<sup>&</sup>lt;sup>24</sup> UNCTAD, Economic Development in Africa Report 2020.

<sup>&</sup>lt;sup>25</sup> Financial Action Task Force and GAFI, Proliferation Financing Report, June 2008.

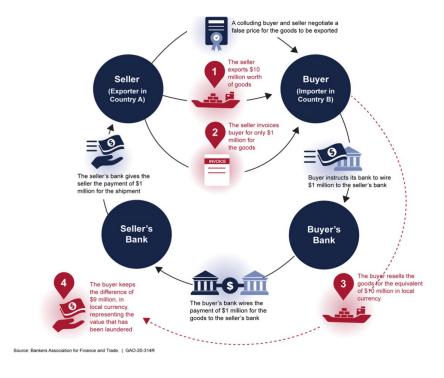
However, not all mis-invoicing or all trade discrepancy is considered as IFFs. For instance, the World Banks considers that when trade mis-invoicing is for the purpose of evading tariffs or for benefiting from trade incentives, or mis-invoicing with the intent to circumvent tax and/or paying less customs duties, so long as the ill-gotten money does not flow out of the countries, it is generally not considered as IFFs, though may still be illegal or illicit. <sup>26</sup> So crossing international borders is an important criterion for classifying trade mis-invoicing as an "illicit financial flow". The World Bank, <sup>27</sup> the United Nations Office on Drugs and Crime (UNODC) and UNCTAD <sup>28</sup> all converge on this point.

#### 1.1.2 OAT payment method leads to high prevalence of IFFs

The processing of payments for open account trade transaction is usually through bank automatic payment systems, e.g. Automated Clearing House, direct debit like online payment. Banks adopt a hands-off approach for OAT, thus transactions have minimum checks from the banking system. Payment is made without documentary or other proof, thus without scrutiny of the underlying reason for the payment. The payment process has no human intervention from third parties, meaning that the transactions usually are processed straight through without any checks from the financial institutions or other bodies. The role of the banks is merely to send the payment on behalf of its customer in line with instructions. The information relating to the transaction is just shared between the importer and exporter, with no transparency to other parties. Crooked traders exploit this feature to manipulate the payment to mitigate the risk of exposure, allowing them to move illicit funds.

The following chart (Figure 1) from the U.S. Government Accountability Office explains how perpetrators of IFFs use OAT rather than documentary trade, to avoid being detected.

Figure 1: Ease of Open-Account Trade (in red) used for IFFs vis-a-vis Documented Trade Transactions (in blue)



<sup>&</sup>lt;sup>26</sup> World Bank, "Illicit Financial Flows", Brief, 7 July, 2017.

<sup>&</sup>lt;sup>27</sup> World Bank, "Illicit Financial Flows", Brief.

<sup>&</sup>lt;sup>28</sup> UNODC and UNCTAD, "Conceptual Framework for the Statistical Measurement of Illicit Financial Flows".

To nobody's surprise, OAT gives institutions and people wishing to engage in IFFs almost a free hand to transfer money across border with ease for all IFF purposes like money laundering, tax evasion and avoidance, corruption, profit shifting etc. The flexibility of open account terms and lack of transparency, third party monitoring and supervision facilitate the over- or under-invoicing of goods and services. It is one of the primary methods of laundering money for illegal transfer to another country<sup>29</sup>.

The U.S. Government Accountability Office (GAO) after extensive study of various data, reports from U.S. governmental departments, international organizations and academic experts and conducting surveys, concluded in 2019 that "one of the primary vulnerabilities of the U.S. financial and trade systems is open-account trade…"<sup>30</sup>. The Financial Action Task Force (FATF) and the Egmont Group<sup>31</sup> have noted that "open account transactions are particularly susceptible to trade-based money laundering (TBML) schemes which is one of the primary means that criminal organizations use to launder illicit proceeds through disguising its origins, value and integrate it into the formal economy."<sup>32</sup> According to the U.S. Homeland Security Investigations (HSI), the damage to worldwide customs organizations by trade-based money laundering alone is estimated at approximately \$9 trillion between 2008 and 2017<sup>33</sup>. Global Trade Review estimates that trade mis-invoicing is responsible for 63% of trade-based money laundering.<sup>34</sup>

Transfer pricing by MNEs frequently use trade mispricing and manipulate intragroup import and export prices to move money across borders through transfer pricing illicitly without triggering regulatory alerts.

While specific data on the proportion of trade mis-invoicing arising solely from open account transactions is scarce, the inherent vulnerabilities in OAT—such as minimal oversight and absence of documentation—make it a significant channel for such illicit activities. Enhancing transparency and implementing stricter verification measures in open account trade could mitigate the risks associated with trade mis-invoicing and IFFs.

<sup>&</sup>lt;sup>29</sup> World Customs Organization, *Illicit Financial Flows via Trade Mis-invoicing*.

<sup>&</sup>lt;sup>30</sup> See https://www.gao.gov/assets/gao-20-314r.pdf.

<sup>&</sup>lt;sup>31</sup> Financial Action Task Force – Egmont Group, *Trade-Based Money Laundering*.

<sup>&</sup>lt;sup>32</sup> See <a href="https://www.gao.gov/assets/gao-20-314r.pdf">https://www.gao.gov/assets/gao-20-314r.pdf</a>.

<sup>&</sup>lt;sup>33</sup> Homeland Security Investigations (HSI), Cornerstone Newsletter Issue 61, February 2025. Available from https://www.ice.gov/doclib/cornerstone/pdf/cornerstone202502.pdf.

<sup>&</sup>lt;sup>34</sup> Global Trade Review (GTR), February 2023.

#### II. OAT HAS BEEN SURGING AS A DOMINANT TRADE FINANCING MODE

Despite the inherent risks, the share of international trade using OAT has been surging over the years while the share of letters of credits' use has been decreasing. Approximately 80% to 85% of the global US\$ 16 trillion trade per year is conducted through OAT, <sup>35</sup> (see Figure 2) thus it is the most important form of international trade financing, especially among trusted partners. OAT benefits importers by providing them with access to goods and services without upfront payment, enhancing cash flow and mitigating risks.

Only 20% of total trade transactions are carried out through bank financing, such as a letter of credit for which a financial institution provides some form of financing to a party in the transaction. This is referred to as traditional trade finance or documentary trade transactions, in which financial institutions are able to leverage the SWIFT network to exchange payment information.

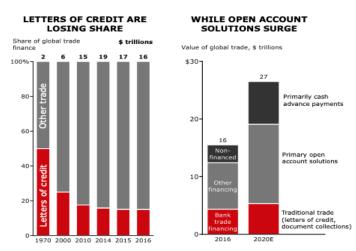


Figure 2: The surging of open account trade

Source: World Bank; ICC Global Survey Rethinking Trade and Finance (annual reports 2010-2015); MISYS Financing Future Supply Chains

Source: https://www3.weforum.org/docs/White Paper Trade Tech report 2018.pdf

The reason why OAT is more popular than traditional trade financing is owing to a few reasons. OAT leverages digital technology between the two parties in the transaction, and it is therefore more time efficient compared with the letter of credit whose paper work would change hands 30 to 50 times per transaction. To go through normal procedures through documentary paper work, e.g. letter of credit, bill of lading, commercial invoice, is also costly, as the intermediary cost from banks would range from 0.75% to 1.5% of the value of goods.

OAT is clearly importer-friendly in terms of cash flow and cost. To deliver goods before payment is due is an extension of credit by the seller to the buyer, thus beneficial for the cashflow to importers. Owing to intense competition in international trade and squeezed profit margins, importers often press exporters for OAT. Therefore, OAT can be considered as a cheaper, simpler and faster way of conducting trade. It is also normally utilized when each party is known to the other and there is mutual trust. However, as noted, it does expose exporters to credit and non-payment risks even though there are mechanisms to mitigate the risk.

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<sup>&</sup>lt;sup>35</sup> The Wolfsberg Group, ICC and BAFT Trade Finance Principles 2019 amendment, section 6.1.

Another reason for the fast increase is the trend of banks distancing themselves from trade finance transactions, particularly in recent years. This is predominantly because of the increasing cost for banks to comply with regulatory changes driven by the financial crisis, rising tariffs and geopolitical and market volatility. Banks have to perform numerous compliance checks which eat into their profit margin. On average, a large trade finance bank can spend anywhere from US\$25 million to US\$42 million annually on risk, compliance, sanctions and anti-money laundering tasks.<sup>36</sup> High potential fines on banks for non-compliance, particularly in cases of unilateral coercive measures, would lead to overcompliance as a way to avert risks including risks in offering trade finance. According to Deloitte, compared to pre-financial crisis (sub-prime crisis) spending levels, operating costs spent on compliance by financial institutions have increased by over 60 percent for retail and corporate banks.<sup>37</sup> In view of the fact that trade finance products often have lower profit margins and higher complexity compared to other banking activities, intensive and costly regulatory scrutiny have made trade finance less attractive to banks.

<sup>&</sup>lt;sup>36</sup> EY, "How can trade finance balance compliance cost and technology?" Available from <a href="https://www.ey.com/en\_ch/insights/banking-capital-markets/how-technology-is-reducing-trade-finance-risk-and-compliance-costs">https://www.ey.com/en\_ch/insights/banking-capital-markets/how-technology-is-reducing-trade-finance-risk-and-compliance-costs</a>.

<sup>&</sup>lt;sup>37</sup> See <a href="https://www2.deloitte.com/us/en/pages/regulatory/articles/cost-of-compliance-regulatory-productivity.html">https://www2.deloitte.com/us/en/pages/regulatory/articles/cost-of-compliance-regulatory-productivity.html</a>.

## III. TECHNOLOGY CAN COME TO THE RESCUE - THE POTENTIAL OF BLOCKCHAIN TECHNOLOGY FOR REVOLUTIONIZING THE TRADE PAYMENT SYSTEM AND COMBATTING IFFS

With OAT's inherent vulnerabilities and loopholes, the natural counter measure to address the problems is likely to be the introduction of regulations. However, given the sheer volume of transactions, jurisdictional fragmentation, and reliance on commercial confidentiality, to regulate OAT would be logistically or economically difficult. Blanket regulation would be disruptive to global trade, with 80% -85% of it using OAT. OAT is hard to regulate, as trade transactions are often multi-jurisdictional with many transactions involving more than two countries and many entities. Who to regulate and how to regulate would be questions to ask. Sovereignty would also give rise to implementation difficulties. Price validation is extremely complex and tricky. In addition, OAT involves private contracts with terms and pricing as commercial secrets.

While regulating OAT is not easy, strategic interventions—particularly involving modern technology - could significantly reduce OAT abuse.

BCT holds immense potential to transform various sectors, e.g. trade financing, management of supply chain and shipping, and create significant value. It has been increasingly adopted and implemented across various industries in recent years.

Blockchain is a type of distributed ledger technology. It is decentralized, meaning there is no need to rely on a single trusted third party, as it is the case with the banking system. Every authorized party can access the same information for complete transparency, which helps increase trust and prevent fraud. Unlike traditional databases, which are administered by a central entity, blockchains rely on a peer-to-peer network that no single party can control.<sup>39</sup> A blockchain is also immutable. Once a transaction or information is entered/recorded, it cannot be altered, deleted, or changed without notifying all parties. Immutability provides security and reliability. The entire history of trade transactions can be accessed by authorized parties. therefore enabling regulators to conduct risk assessment as transactions are traceable, trackable and verifiable. It is also efficient as the data is in real time. The transactions are stored/recorded and accessed by all parties involved simultaneously. It can revolutionize traditional trade financing like the letters of credit. With Blockchain technology, the processing time for a letter of credit from issuing to approval, which usually takes between seven to ten days, could be reduced under 24 hours. 40 Each item of data is entered with a timestamp and unique cryptographic signature. The system allows participants with no particular trust in each other to collaborate and participants in a blockchain can access and check the ledger at any time. With automatic exchange of data which is secure and immutable among authorized parties, customs and other institutions could use the data to detect trade mis-invoicing and trade-based money laundering and they could verify transaction data with the custom departments of involved trading partners in real time when they suspect any anomalies in price, quantity, quality, etc. Trading partners can communicate instantly to process trade and manage finance more quickly and effectively. 41 Customs authorities, banks, freight carriers could be involved and verify data.

Owing to its decentralized and distributed nature as well as its application of cryptographic techniques, blockchains are said to be highly resilient to cyber-attacks. 42

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<sup>&</sup>lt;sup>38</sup> Financial Action Task Force – Egmont Group, *Trade-Based Money Laundering*.

<sup>&</sup>lt;sup>39</sup> Emmanuelle Ganne, Can Blockchain revolutionize international trade? (Geneva, WTO, 2018).

<sup>&</sup>lt;sup>40</sup> PW Consulting Information & Electronics Research Center, "Blockchain in Financial Market", 8 February 2025.

<sup>&</sup>lt;sup>41</sup> Valeria Sica, "How Tech is Changing the Future of Trade", CITI, 12 May 2022.

<sup>&</sup>lt;sup>42</sup> Ganne, Can Blockchain revolutionize international trade?

BCT can also take care of the concerns of OAT users. As mentioned above, the OAT's popularity is largely because of its low cost, efficiency and flexibility. Blockchain technology can make international trade faster, cheaper, more secure and carries potential to close loopholes of OAT which allow widespread IFFs. There are many incentives for using BCT for real exporters and importers but no incentives at all for IFF perpetrators. With BCT, information is shared among authorized parties simultaneously, but the data is not publicly accessible since authorization and unique cryptographic signature are required for reviewing the data. As data is traceable and trackable to all parties involved in a transaction, BCT can reduce invoice fraud, duplicate financing, and false documentation. It can reduce exporter's credit risks as BCT can reduce the risk of phantom shipments and misinvoicing. It also minimizes human error. By lowering operating costs through eliminating intermediaries and manual paperwork, BCT can be more cost efficient. As a matter of fact, the driver for the increasing adoption of BCT is the demand for operational efficiency and cost reduction. Blockchain can cut operation costs by 65%.<sup>43</sup>

In 2024, UNCTAD discussed the potential of BCT to revolutionize processes in various areas. from finance to trade and from government public services to humanitarian work and development aid. It pointed out that "the combination of blockchain and industry 4.0 technologies may present windows of opportunity for some countries to catch up and others to forge ahead."44. The Group of 77 (G77) and China supported the discussion about the Blockchain technology.<sup>45</sup>

The Organisation for Economic Co-operation and Development (OECD) acknowledges that blockchain-based infrastructure can help to verify and track contracts and immensely improve transparency and prevent corruption.46

The European Union (EU) cherishes the ambition to be a leader in blockchain and web3 technology, becoming a major innovator in blockchain and a home to significant platforms, applications, and companies using BCT. The EU has had various initiatives to support the development and adoption of the Blockchain technology.<sup>47</sup>

The World Bank considers that the key blockchain functionalities such as it being immutable, permanent, secured, and shareable will enable the World Bank, its member countries, and its borrowers to have "one version of truth" during the lifecycle of World Bank funded development projects.48

Merkle Science, a platform for 70 digital companies, banks, regulators, etc, views that "Blockchain is one of the most significant developments in the financial sector because it has the potential to reduce fraud, offer quick and secure exchanges, and ultimately aid in risk management within the connected global financial system."49

The World Customs Organization in its report prepared for the G20 on IFFs<sup>50</sup> and trade misinvoicing also confirmed that the Blockchain technology has several important features that could be leveraged to effectively tackle frauds/crimes.

<sup>&</sup>lt;sup>43</sup> PW Consulting Information & Electronics Research Center, "Blockchain in Financial Market.

<sup>&</sup>lt;sup>44</sup> UNCTAD, Harnessing blockchain technologies for sustainable development, TD/B/C.II/52, 19 February 2024. Available from <a href="https://unctad.org/system/files/official-document/ciid52">https://unctad.org/system/files/official-document/ciid52</a> en.pdf.

<sup>&</sup>lt;sup>45</sup> See <a href="https://www.g77.org/geneva/statements/042924.html">https://www.g77.org/geneva/statements/042924.html</a>.

<sup>&</sup>lt;sup>46</sup> OECD, "Blockchain Technologies as a Digital Enabler for Sustainable Infrastructure" (Paris, 2019).

<sup>&</sup>lt;sup>47</sup> European Commission, "Blockchain and Web3 Strategy", 12 December 2024.
Available from <a href="https://digital-strategy.ec.europa.eu/en/policies/blockchain-strategy">https://digital-strategy.ec.europa.eu/en/policies/blockchain-strategy</a> (accessed 2 June 2025).

<sup>&</sup>lt;sup>48</sup> World Bank, Exploring Blockchain For Disbursement Traceability, Outcome report, November 2020.

<sup>&</sup>lt;sup>49</sup> See <a href="https://www.merklescience.com/3-reasons-why-the-future-of-anti-money-laundering-rests-on-blockchain">https://www.merklescience.com/3-reasons-why-the-future-of-anti-money-laundering-rests-on-blockchain</a>.

<sup>&</sup>lt;sup>50</sup> World Customs Organization, *Illicit Financial Flows via Trade Mis-invoicing*.

As early as 2018, the U.S. Customs and Border Protection (CBP) piloted a proof-of-concept assessment to evaluate the application of BCT to the process of submitting documents for cargo entry associated with the North American Free Trade Agreement/Central America Free Trade Agreement. Subsequently, GAO reviewed the CBP report on a proof-of-concept pilot project exploring the use of BCT as a digital replacement for CBP's existing paper-based system of processing trade-related documents.<sup>51</sup> GAO suggest using blockchain technology to develop distributed ledgers and develop a digital signature system based on this technology<sup>52</sup>.

There has been wide recognition that BCT has the potential to curb IFFs and revolutionize global trade by streamlining cross-border transactions and enhancing transparency, security, traceability and efficiency.<sup>53</sup> The fact that BCT can help reduce falsification and fraud by providing tamper-proof records of information would contribute to make international trade less liable to trade mis-invoicing, money laundering, and other IFF activities.

A research paper published by U4 Anti-Corruption Resource Centre, a team of anti-corruption advisers working to share research and evidence to help international development actors to fight corruption, highlighted that "Blockchain has the potential to be a game changer in anti-corruption efforts. Whether it is successful or not largely depends on contextual elements – infrastructures, legal systems, social or political settings – rather than on the technology itself." This is only one of the many expert analyses which are very affirmative of the use of BCT for anti-corruption purposes but also stresses the importance of the ecosystem for the technology to function.

In addition to preventing IFFs, BCT, once adopted, can also revolutionize the 20% of international trade which still relies on traditional trade financing like manually processed letter of credit. It is dinosaur-like to continue to use paper based and manual processing of trade payments, with one single transaction often requiring the interaction of more than 20 entities, and involving between 10 and 20 paper documents and 5000 data field exchanges. The adoption of BCT can bring the hugely outdated traditional trade finance to the 21st century and make it faster, minimize human errors, and be more cost effective. Currently, leveraging technology to optimize trade invoice processing and payment disbursement is a major issue being discussed. Bain & Company estimates that distributed ledger technology, if adopted the right way by all participants in the trade ecosystem, could reduce trade finance operating costs by 50-70% and improve turnaround times three- to fourfold. The adoption of new technology can also help small- and medium-sized enterprises manage cash flow more effectively, reduce trade costs and participate in international trade. Table 1 provides a summary of the main characteristics of the BCT.

<sup>&</sup>lt;sup>51</sup> U.S. Government Accountability Office, Science and Tech Spotlight: Blockchain & Distributed Ledger Technologies, GAO-19-704SP (Sept. 16, 2019).

<sup>&</sup>lt;sup>52</sup> U.S. Government Accountability Office, Science and Tech Spotlight: Blockchain & Distributed Ledger Technologies.

<sup>&</sup>lt;sup>53</sup> Yetunde Adeoye *et al.*, "Blockchain and Global Trade: Streamlining Cross Border Transactions with Blockchain", *International Journal of Multidisciplinary Research and Growth Evaluation* (March 2025); Ganne, *Can Blockchain revolutionize international trade?* 

<sup>&</sup>lt;sup>54</sup> Per Aarvik, Arne Strand, "Blockchain as an anticorruption tool", U4 Anti-Corruption Resource Centre, 2020.

<sup>&</sup>lt;sup>55</sup> Ramachandran *et al.*, "Digital ecosystems in trade finance: seeing beyond the technology", BCG, 23 September 2019.

<sup>&</sup>lt;sup>56</sup> World Economic Forum, Bain & Company, "Trade Tech – A New Age for Trade and Supply Chain Finance", White Paper, September 2018.

Table 1: Main characteristics of BCT

Characteristics	Explanation
Decentralized	Trade transaction data in a blockchain network is not verified by a central authority or third party. Instead, each block is verified by the nodes connected to it. Each user on a node has a copy of the same blockchain and can enter data into it.
Immutability	Trade transactions and data on a blockchain can be verified, but they are immutable due to timestamp and permission control limitations.
Security	The immutability of a blockchain ensures that agreed-upon transactions are recorded and cannot be altered, thereby providing security and establishing a clear trail of the transaction.
Anonymity	A distributed ledger connects multiple nodes, but does not reveal the real identities of participants but links to addresses and keys.
Transparent/Visibility	Input data are saved, and the consensus mechanism ensures that any modifications are recorded, making transactions highly transparent and visible, but information is not publicly accessible.

Sources: Cole *et al.* (2019); Gurtu and Johny (2019); van Hoek (2019); Wang *et al.* (2019); Dubey *et al.* (2020).<sup>57</sup>

The adoption of BCT does not require universal access to the internet as a precondition, since OAT has been increasing and is covering 80-85% of international trade, while the proportion of people using the Internet increased from 40% to 67% between 2015 and 2023.<sup>58</sup> This implies that international traders can function and thrive in an environment without universal internet access. In least developed countries (LDCs), internet access has grown faster, increasing from 11% to 35%, in the share of individuals using the Internet.<sup>59</sup>

<sup>&</sup>lt;sup>57</sup> Keru Duan, Gu Pang, Yong Lin, "Exploring the current status and future opportunities of blockchain technology adoption and application in supply chain management", *Journal of Digital Economy*, Volume 2, December 2023, pages 244-288.

<sup>&</sup>lt;sup>58</sup> OECD, Global Outlook on Financing for Sustainable Development 2025.

<sup>&</sup>lt;sup>59</sup> United Nations Economic and Social Council, Progress Towards the Sustainable Development Goals - Report of the Secretary-General: Supplementary Information, 2024. Available from <a href="https://unstats.un.org/sdgs/files/report/2024/E">https://unstats.un.org/sdgs/files/report/2024/E</a> 2024 54 Statistical Annex I and II.pdf.

### IV. THE NEED FOR AN ENABLING ECOSYSTEM FOR ADOPTING BLOCKCHAIN TECHNOLOGY

Though BCT was launched in 2009, its implementation and adoption are still at a nascent stage <sup>60</sup>. The technology, as noted, has shown promises in various sectors and there is growing interest from both public and private sectors in investing in blockchain technology and infrastructure. While blockchain offers powerful tools to close loopholes of OAT and combat IFFs as a whole, it is essential to address some fundamental issues for its wider use, including some technical issues such as DeFI platform creation, scalability, and cross-chain interoperability. However, challenges in implementing technological solutions are usually related not only to the technologies themselves but also to the supporting ecosystem. <sup>61</sup> For instance, harmonizing regulatory frameworks and the rest of the elements for an enabling ecosystem including mainstreaming, capacity building, etc. are equally important.

For achieving widespread adoption and integration, technology maturity and a well-functioning ecosystem that enables commercial viability for platform management are needed.

Regulatory frameworks would be important to allow the smooth operation and expansion of BCT. The wide-scale deployment of Blockchain for trade finance requires a conducive and unified regulatory framework that recognizes the legal validity of blockchain transactions, clarifies applicable law and liabilities, and regulates the way data can be accessed and used, including updating national laws to recognize digital trade documents and blockchain records as legally binding <sup>62</sup>.

Some industry or consortium platforms using BCT have reached significant scale in adopting it. For instance, TradeLens handled about 65% of the global container shipments at its peak, then closed down owing to difficulties in raising finance. 63 The blockchainbased trade financing network Marco Polo aimed to streamline and simplify global trade finance processes. During its good times, it had over 30 major banks backing it.<sup>64</sup> Then in early 2023, the company filed for insolvency after failing to secure additional funding, citing debts of €5.2 million and a shortfall in assets. Commentators and experts suggest that, "The failure of the enterprise Blockchain and consortium Blockchain does not mean that Blockchains as a technology have failed" 65. The difficulty to reach scalability to make these platforms and networks commercially viable shows the challenge of new technology to be adopted at international scale and the growing pains for new enterprises to adopt new technology. A senior technical manager of TradeLens admitted that "while we successfully developed a viable platform, the need for full global industry collaboration has not been achieved. As a result, TradeLens has not reached the level of commercial viability necessary to continue work and meet the financial expectations as an independent business."66 Both of these two enterprises operated with the ambition of reaching the four corners of the world, which is a massive challenge for a new technology and a new firm. It seems government support would be required to reach such objective.

<sup>&</sup>lt;sup>60</sup> M. Alazab, S. Alhyari, A. Awajan, A.B. Abdallah, "Blockchain technology in supply chain management: an empirical study of the factors affecting user adoption/acceptance", *Cluster Computing* (March 2021).

<sup>&</sup>lt;sup>61</sup> UNCTAD, Harnessing blockchain technologies for sustainable development.

<sup>&</sup>lt;sup>62</sup> U4, "Is blockchain hitching a ride on the Covid-19 vaccination wave?", 23 June 2022. Available from https://www.u4.no/blog/is-blockchain-hitching-a-ride-on-the-covid-19-vaccination-wave.

<sup>63</sup> Global Trade Review, "we.trade calls it quits after running out of cash", 6 June 2022.

<sup>&</sup>lt;sup>64</sup> Nicky Morris, "Marco Polo lowers barriers to entry for blockchain trade finance", 28 March 2019.

<sup>&</sup>lt;sup>65</sup> Ken Lyon, "TradeLens' demise is not a Blockchain failure", 13 December 2022. Available from <a href="https://ti-insight.com/briefs/tradelens-demise-is-not-a-blockchain-failure/">https://ti-insight.com/briefs/tradelens-demise-is-not-a-blockchain-failure/</a>.

<sup>66</sup> Lora Cecer, "Tradelens Discontinues Operations. Why You Should Care.", Forbes, 5 December 2022.

Governmental support is important for firms during the period of adoption of innovative technologies especially involving interacting with many countries. The support could be in the forms of incentivizing research, facilitating infrastructure building, harmonizing rules and regulations, etc.

For instance, the EU has actively supported blockchain development, including scalability, primarily through research funding, public-private partnerships, and infrastructure investment, and promoting standardization.<sup>67</sup> The EU Blockchain Regulatory Sandbox (launched in 2023) allows blockchain developers to test innovations under flexible legal supervision, reducing barriers to scaling new models.<sup>68</sup> The European public sector is building its own pan-European blockchain infrastructure, with the European Blockchain Services Infrastructure. The Horizon 2020 and Horizon Europe programs have allocated approximately €700 million in grants to projects involving blockchain or Distributed Ledger Technologies between 2016 and 2024.<sup>69</sup>

The EU is not alone in recognizing the strategic importance of BCT. Countries and regions around the world have launched national strategies, public-private consortia, and regulatory frameworks to foster its adoption. For instance, China's Blockchain-based Service Network aims to provide a standardized infrastructure for enterprise blockchain development at scale, while the United Arab Emirates' Dubai Blockchain Strategy envisions migrating 100% of applicable government transactions to blockchain. In the United States, despite a fragmented regulatory environment, both federal agencies and states have introduced blockchain-friendly legislation and pilot programs. Australia, Singapore, South Korea, and Switzerland among others have invested significantly in blockchain R&D and digital identity systems. This global momentum illustrates a growing consensus, namely that Blockchain is viewed not merely as a technological tool, but as a foundational infrastructure for future digital economies. There is, however, no one-size-fits-all solution for adopting and promoting BCT. It is essential to assess specific national conditions.

<sup>&</sup>lt;sup>67</sup> European Commission, "Blockchain and Web3 Strategy".

<sup>&</sup>lt;sup>68</sup> European Commission, "European Blockchain Regulatory Sandbox". Available from <a href="https://digital-finance-platform.ec.europa.eu/cross-border-services/ebsi">https://digital-finance-platform.ec.europa.eu/cross-border-services/ebsi</a>.

<sup>&</sup>lt;sup>69</sup> European Commission, "Blockchain and Web3 Strategy".

#### V. LEVERAGE AFCFTA'S DIGITAL TRADE PROTOCOL

Launched in 2021, the African Continental Free Trade Area (AfCFTA) is the world's largest free trade area by number of countries, with 54 signatories. It aims to establish a single market for goods and services across the continent, facilitating intra-African trade, reducing tariffs, and harmonizing trade procedures so as to stimulate industrialization, and enhance economic growth. Currently African countries trade significantly more with countries outside the continent. As of 2023, intra-African trade accounted for approximately 15% of Africa's total trade, reflecting a 7.2% year-on-year rise, reaching a value of \$192 billion. To Though starting from a low level, intra-continental trade has been growing steadily in recent years. Intra-African trade has great potential for expansion and BCT can be a facilitating tool while promoting the digital economy within the continent.

The AfCFTA's Digital Trade Protocol (DTP) was adopted in February 2024.<sup>71</sup> The DTP's goals include boosting intra-African trade through unifying and harmonizing regulatory framework for Africa's digital economy and regional trade, promoting cross-border data flows and paperless trade, and enhancing cybersecurity measures.<sup>72</sup> The exploration of blockchain adoption to reduce OAT's risks for IFFs and make trade more effective aligns well with DTP's goals. The DTP acknowledges BCT as an emerging and advanced technology and contains the essential requirements for implementation, including accepting the legal validity of electronic documents, allowing contracts to be concluded by electronic means, and permitting electronic invoicing and paperless trading. It addresses the use of digital payments and making settlement systems more interoperable. In principle, all the issues relating to legal framework, technical issues and infrastructure for adopting BCT at continental level have been covered by the DTP. Implementing the Protocol would foster a more integrated and dynamic digitalized trade system across Africa.<sup>73</sup> The protocol will become effective 30 days after having had 22 countries depositing ratification.

As African countries make significant strides in digitalizing their economies, other forms of IFFs such as corruption, tax evasion and illicit flows from other criminal activities can be curbed as there can be much stronger screening and monitoring with the adoption of modern technology and the introduction of the supporting ecosystem.

The vision and elements in the DTP are as far reaching as EU's "Shaping Europe's Digital Future" adopted in 2020 which has outlined the EU's vision and roadmap for a digital transformation including the support of the adoption of BCT and a EU digital single market. Naturally, EU has greater fiscal space, financial resources and administrative capacities in implementing its vision. Nevertheless, many African countries have individually made important progress in past years in promoting the digital economy. A continental endeavour will certainly give a boost and dynamism in this direction. Although BCT is not a silver bullet, by adopting and strategically implementing it in Africa's international trade, BCT has strong potential to reduce IFFs and increase badly needed domestic financial resources in the continent.

<sup>&</sup>lt;sup>70</sup> Ecofin Agency, "Intra-African trade up 7.2% in 2023, report finds", 19 June 2024. Available from <a href="https://www.ecofinagency.com/public-management/1906-45648-intra-african-trade-up-7-2-in-2023-report-finds">https://www.ecofinagency.com/public-management/1906-45648-intra-african-trade-up-7-2-in-2023-report-finds</a>.

<sup>&</sup>lt;sup>71</sup> African Union, "Significant Progress on AfCFTA Implementation Highlighted at the Conference of Speakers of Parliaments", 19 September 2024. Available from <a href="https://pap.au.int/en/news/press-releases/2024-09-19/significant-progress-afcfta-implementation-highlighted-conference-s">https://pap.au.int/en/news/press-releases/2024-09-19/significant-progress-afcfta-implementation-highlighted-conference-s</a>.

<sup>&</sup>lt;sup>72</sup> Alberto Lemma, Prachi Agarwal and Dirk Willem te Velde, "Implementing the Digital Trade Protocol of the African Continental Free Trade Area" (draft), Overseas Development Institute, 18 October 2024.

<sup>&</sup>lt;sup>73</sup> Lemma *et al.*," Implementing the Digital Trade Protocol of the African Continental Free Trade Area".

#### **CONCLUSIONS**

OAT has inherent loopholes and vulnerabilities which have been manipulated to enable IFFs. At a time when developing countries badly need more development finance to foster economic growth and cope with the lasting scars of overlapping crises, it is of great urgency to take effective measures to fight against the massive drain of financial resources due to IFFs from those countries. Trying to curb IFFs without addressing OAT induced loopholes is like locking your front door and leaving the back door wide open.

BCT can be leveraged to make trade payments and transactions transparent, faster and cheaper, and subject to monitoring, therefore contributing to curb IFFs. However, an enabling ecosystem and government support would be required to adopt BCT at scale.

A phased and targeted approach could be considered. The adoption of BCT and efforts to digitalize trade do not require to wait for universal access to internet as OAT users have already access to internet and some modern technology.

The AfCFTA's Digital Trade Protocol has laid the foundation for accelerating Africa's digital trade integration, similar in vision to the EU's Digital Single Market. BCT can be a game-changer in Africa's fight against IFFs—especially in trade. However, the pace, depth, and success will depend on political will, infrastructure investment, and regulatory harmonization across the continent.

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