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## **Can UNCITRAL Instruments Advance Supply Chain Finance to Benefit Small and Medium Enterprises?**

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### **Abstract**

This paper determines how UNCITRAL initiatives can contribute to the advancement of SCF programmes to benefit SMEs. Based on research within the field of financing of international trade, it has been found that SMEs from developing countries have increasingly used open account terms when exporting goods to developed countries. Many SMEs suffered liquidity constraints during the last global financial crisis and currently there exists a shortfall of 1.6 trillion USD in global trade finance.

The paper introduces some of the current SCF programmes that highlights the divergences in secured transaction laws across jurisdictions, the need for dematerialised trade documents and the importance of a collaborative model for market participants. The paper proposes the way forward to increase visibility of supply chains where LSPs as independent third parties may assist in verification and risk assessment for banks and other trade financiers. The research approach includes conceptual development complemented by legal analysis. Certain UNCITRAL conventions, model laws and on-going works are discussed to show how they can reduce information asymmetry between the supply chain participants to provide SCF. The role of industry standards as a governance technique is briefly discussed. The findings of this paper can foster innovation in the financial technology arena for greater financial inclusion in international trade and promote UN SDG, Target # 8.3.

Keywords: Supply chain finance, small and medium enterprises, logistics service providers, secured transactions, electronic transferable records, and visibility of supply chains.

### **1. Introduction**

Supply chain management research has shown that a supply chain is as strong as its weakest link.<sup>1</sup> Often that weakest link is a small and medium enterprise (SME) from a developing country and it is starved for working capital.<sup>2</sup> This paper determines how some of the existing and upcoming UNCITRAL instruments can contribute to the advancement of supply chain finance (SCF)<sup>3</sup> programmes to benefit SMEs. In doing

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<sup>1</sup> Christopher, M., “Logistics and Supply Chain Management: Creating Value-Adding Networks”, 4th ed. Financial Times Prentice Hall, New York (2011).

<sup>2</sup> Y. Wang, “Online Supply Chain Finance: Profound changes in Financing of SMEs”, *Contemporary Logistics* 6, (2012).

<sup>3</sup> SCF is the inter-company optimization of financing as well as the integration of financing processes with customers, suppliers, and service providers in order to increase the value of all participating companies”. See Pfohl, H-C., Gomm, M., “Supply chain finance: optimizing financial flows in supply

so the paper primarily focuses on the provisions of existing UNCITRAL instruments, namely, the draft Model Law on Electronic Transferable Records,<sup>4</sup> the Rotterdam Rules,<sup>5</sup> and the Model Law on Secured Transactions,<sup>6</sup> to analyse how flow of information connected to physical movement of goods can be extended to the associated financial flows in global supply chains. In this context, the paper also refers to the on-going efforts at Working Group I on micro, small and medium enterprises and the upcoming work of Working Group IV on cloud computing, identity management and trust services. The paper establishes that the red thread connecting various efforts of UNCITRAL can help to channelize dematerialised information to enhance visibility by allowing collaborative information sharing between stakeholders in global supply chains.

This paper argues that logistics service providers (LSPs) can allow greater visibility in the supply chain processes leading to lower level of inherent risk and allow financial institutions to deliver enhanced SCF programmes to SMEs.<sup>7</sup> Moreover, if SMEs are able to use dematerialised information, then financial institutions can extend SCF services throughout the supply chain.<sup>8</sup> Providing better access to finance to SMEs promotes sustainable development and fulfils Target # 8.3 of the United Nations Sustainable Development Goals.<sup>9</sup> The paper also critically evaluates the law making initiatives of UNCITRAL to show that greater institutional cooperation and usage of innovative governance techniques such as recourse/endorsement of private standards may be the way forward for improving trade regulation in the digital era.

## **2. Need for SCF Programmes and the Emphasis on Information**

Twenty years ago, most international trade transactions used intermediated trade finance such as letters of credit, which not only supported the transaction by providing funds to the exporter or the importer or to both but also provided a sophisticated mechanism to mitigate the risks borne by exporters and importers. However, to speed up international trade transactions, in the past two decades trading parties have increasingly used open account, a form of inter-firm trade finance, which

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chains”, *Logistics Research*, 1(3)2009, pp. 149-161. This definition allows for a broad perspective in terms of the various actors that can benefit from different SCF programmes and highlights the need for coordination and integration throughout the entire supply chain. The definition is also practice-oriented in the sense that it focuses on “value creation for all participating companies”.

<sup>4</sup> Draft Model Law on Electronic Transferable Records with explanatory notes, A/CN.9/920 (4 January 2017) <https://documents-dds-ny.un.org/doc/UNDOC/GEN/V17/000/10/PDF/V1700010.pdf?OpenElement>

<sup>5</sup> United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea, United Nations Publication, Sales No. E.09.V.9, (2009) [http://www.uncitral.org/pdf/english/texts/transport/rotterdam\\_rules/Rotterdam-Rules-E.pdf](http://www.uncitral.org/pdf/english/texts/transport/rotterdam_rules/Rotterdam-Rules-E.pdf)

<sup>6</sup> UNCITRAL Model Law on Secured Transactions, United Nations publication, Sales No. E.09.V.12, (2016) [http://www.uncitral.org/pdf/english/texts/security/ML\\_ST\\_E\\_ebook.pdf](http://www.uncitral.org/pdf/english/texts/security/ML_ST_E_ebook.pdf)

<sup>7</sup> See section 5 of this paper for detailed discussion.

<sup>8</sup> See section 6 of this paper for detailed discussion.

<sup>9</sup> Target #8.3 enunciates to “promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services”, United Nations General Assembly, “Transforming Our World: The 2030 Agenda for Sustainable Development.” A/Res/70/1, 21 October 2015, [http://unctad.org/meetings/en/SessionalDocuments/ares70d1\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ares70d1_en.pdf)

has exposed the exporter to non-payment risks.<sup>10</sup> Open account is cheaper than a letter of credit, but it does not offer the guarantee of payment from a financial intermediary. This left several exporters bankrupt during the financial crisis in 2007/2009 because the buyers to whom they had extended credit were insolvent.

Currently there exists a shortfall of 1.6 trillion USD in global trade finance.<sup>11</sup> Many multinational corporations (MNCs) have found that SME suppliers come under higher degree of financial stress because of their inability to raise working capital. Banks have shown reluctance to lend to SMEs because of the general economic environment and also due to new banking regulations such as Basel III standards that were introduced to boost bank capital, combined with stringent Know Your Customer (KYC) and Anti-Money Laundering (AML) compliance.<sup>12</sup>

While many governments have taken measures to support SMEs, the supply chain stakeholders have been innovating to harness information through digital technology platforms and digital market places to make finance more readily available to SMEs. For example, MNCs are participating in SCF programmes, often in conjunction with banks or other financial institutions, in order to help SME suppliers raise working capital. The invoices that the SME suppliers issue to the MNCs are transferred to a special purpose vehicle or trust, which is in turn funded by banks, institutional investors or, in some cases, the commercial paper market. These SCF transactions are often structured very similarly to a trade receivables transaction albeit with a key extra benefit for the investor or bank providing the financing, which is a direct payment obligation from the underlying debtor. Such financing structure take advantage of a number of legal mechanisms in order to achieve particular effects, but the cross-border nature often adds to the complexity, with multiple legal systems needing to be taken into consideration. Also, MNCs are combining processes of trade finance and cash management to link the financial supply chain with their internal physical supply chain processes of the company. Be that as it may, the SCF programmes initiated by MNCs are limited to certain parts of the supply chain.

Another example of private innovation is an intermediated trade finance solution offered by the banking industry since 2013, called the bank payment obligation (BPO). This trade finance form is in its nature very similar to a letter of credit, albeit not identical.<sup>13</sup> The BPO is a standardised interbank instrument, which is based on electronic information. Unlike a letter of credit, which requires that physical trade documents are manually examined, the BPO requires access to electronic trade data. This data is controlled, verified and matched over time in a highly automated process, as new electronic trade data are submitted about progress of the underlying trade transaction. However, BPO has not been successful so far. The primary barrier in the adoption of BPO is that it requires substantial investment both by banks and adopting

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<sup>10</sup> See Love, I. Role of Trade Finance, Chapter 13 in Gerard Caprio (ed.), *The Evidence and Impact of Financial Globalization*, Academic Press: 1 edition (2012).

<sup>11</sup> Di Caprio, A., Beck, S., Yao, Y., Khan, F., "Trade Finance Gaps, Growth and Jobs Survey", ADB Briefs No. 64, August 2016, p. 1,

<https://www.adb.org/sites/default/files/publication/190631/trade-finance-gaps.pdf>

<sup>12</sup> *Ibid*, 2.

<sup>13</sup> Wynne, G. L. and Fearn, H.: "The bank payment obligation: will it replace the traditional letter of credit – now, or ever?" (2014) *Butterworths Journal of International Banking and Financial Law* 102-104.

companies. In its present form BPO is also restricted to a small part of the supply chain as it is mainly used by MNCs and large publicly rated companies. It fails to cater to the need of the SMEs.<sup>14</sup>

Based on the above examples, the question that arises is - how can the benefits of SCF be fostered across the entire supply chain? The answer lies mainly in managing information flows and creating security interests.<sup>15</sup> This is because electronic platforms are used to provide real-time transparency of physical and financial flows in various SCF solutions. Cross-border information flows have recently caught the attention of both international and national policymakers. In addition to efforts at UNCITRAL, several international institutions such as UN/ESCAP, UN/CEFACT, UNCTAD, WCO and WTO are currently working on various aspects of information flows to facilitate trade. Also, many national jurisdictions have promulgated cross-border data transfer regulations to prevent data from leaving the nation's borders to protect citizens' data from foreign surveillance, and also to protect personal data privacy and data security.<sup>16</sup>

### **3. Financing of Receivables: Example of some SCF Programmes**

The journey of collateral available to businesses has moved progressively from immovable property (land) to movable property (goods and machinery), and subsequently, from tangibles to intangibles (invoices). Some of the popular SCF programmes involve monetization of the supplier's trade account invoices that are known as receivables. Earlier, there were predominantly two types of receivables financing: factoring and invoice discounting. In the past few years two variations of the above structures, namely, discounting of individual invoices over an online platform and reverse factoring have been popularised by companies to make their cash flows efficient. They are discussed briefly to highlight the legal differences between structures.

#### **3.1. Open account SCF programme**

Open account SCF programme is mostly popular in the US and some parts of Europe. It involves three parties, namely the supplier, the buyer and the bank. The supplier signs up to negotiate and sell its receivables owed by the buyer to the bank. The supplier sells goods to the buyer, generating an invoice that it posts on the SCF platform for the buyer's confirmation. Once the buyer confirms the invoice as valid, the related receivable becomes eligible for purchase by the bank. Only confirmed invoices are eligible for purchase; so a specific transaction can be sold if both the supplier and the buyer agree to have it sold. In confirming the invoice, the buyer

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<sup>14</sup> Only 50 corporates and 20 banks can use BPO. See Dab, S., Ramachandran, S., Chandna, R., Hanspal, R., Grealish, A. and Peeters, M., "Embracing Digital in Trade Finance", Boston Consulting Group, October 2015, p. 12.

<sup>15</sup> The tax structure, accounting standards, and the regulatory environment of financial institutions of a jurisdiction also have an important effect. They are left outside the scope of this paper.

<sup>16</sup> Unfortunately, such regulations may also be viewed as new non-tariff measures that increasingly pose challenge to the international trading community. Moreover, extraterritorial application of such laws adds to the concern. The regulations on cross-border data flows can take variety of forms; for example, some governments require prior consent for data transfers abroad, some require local servers to be established within the territory, some have outright ban of personal citizens' information flow out of the economy, and some require copies of information sent abroad to be stored domestically.

agrees that it will pay the bank the full amount of the invoice on its due date without any claim, abatement, deduction, reduction, or offset of any kind. This confirmation enables the bank to look directly to the buyer for payment. The buyer may still request deductions and make similar claims against the supplier, with those offsets potentially applying to future invoices, but the buyer will not be permitted to challenge the amount owed on the receivable sold to the bank.

The open account based SCF programme became popular in the US when it established the unitary model of security interest on personal property, based on Article 9 of the Uniform Commercial Code (UCC). The unitary concept of security interest brought all secured transactions on personal property and fixtures under the same roof where a transaction in substance secures payment and performance of an obligation regardless of its form or who has title to the collateral. Australia, Canada and New Zealand are some of the prominent jurisdictions which has enacted their laws based on a similar unitary model. The Continental European countries do not follow the unitary concept of security interests as in the US and consequently, title and receivables financing are carried out based on personal property security laws.

### **3.2. Negotiable instrument based SCF programme**

Negotiable instrument based SCF programme is the dominant structure in many jurisdictions outside the US and Europe as selling intangibles can be cumbersome and may expose the investor to additional legal risks, such as fraud and insolvency. The parties involved in such a programme are the supplier, the bank and sometimes the buyer. The supplier submits invoices, which the buyer approves. However, the supplier also creates a draft, a bill of exchange, a negotiable promissory note, or any other form of negotiable instrument. The supplier sells the negotiable instrument to a bank, who then takes physical possession of the instrument, and presents it to the buyer for payment on the invoice maturity date. The invoices sold as negotiable instruments give the bank priority against claims of the buyer's other creditors, including in a bankruptcy proceeding. The law relating to negotiable instruments apply to such transactions.

### **3.3. Non-recourse receivables purchase**

Receivables purchase is used worldwide and involves primarily the supplier and the bank. It entails a supplier selling to the bank its rights to certain accounts receivable owed by a buyer. The buyer does not have to confirm each invoice before the receivable can be sold. The downside of this arrangement for the bank is that there is no direct confirmation from the buyer that it will pay the bank. Thus, the bank has to make sure that what it is acquiring from the supplier is a valid and enforceable claim against the buyer. The bank usually conducts significantly more due diligence on the supplier before entering into such a transaction, and ensures that the supplier is transferring the receivables via a legal true sale.

## **4. SCF Dependent on Network Effects and Legal Framework: Swiss Post Case**

A contract for sale is the starting point of any commercial transaction and it is closely interrelated with other contracts relating to carriage of goods, insurance and financing. Once the goods are shipped through a LSP, the seller issues an invoice to the buyer

and is entitled to payment within a stipulated number of days. The LSP as transporter has knowledge about the location of the goods and may also physically possess the goods. In addition, it often holds valuable insight on the seller's and buyer's business conditions. Over the years LSPs have developed their own practices to track goods in international supply chains, and now they have the possibility to turn this knowledge into an opportunity to develop related financial services.

An alternative approach in the supply chain can be that a LSP is not only responsible for transport, handling and storage, but also emerges as a financier. For instance, a Swiss LSP buys the goods from the manufacturer and obtains an interim legal ownership before selling them to manufacturers' customers after a certain time. The LSP is also supported by a purchase guarantee from the manufacturer, which the manufacturer has negotiated in framework agreements with its customers. The rationale of this alternative approach is to achieve an improvement in the inventory financing within the supply chain by adopting a "network perspective". The financial justification for assuming ownership to the goods by the LSP has already been discussed in financial literature.<sup>17</sup> It is submitted that there is a legal reasoning as well that necessitates transfer of ownership to the LSP. Under Swiss law, creating a security interest in moveable property requires more than a pledge agreement. Since there is no security interest register in which the information about a pledge agreement is publicly available, an enforceable pledge of moveable property requires that the pledgor physically deliver the property to the lender in compliance with the *Faustpfandprinzip* (which literally means the fist pledge principle).<sup>18</sup> A Swiss court will not consider a pledge to be perfected if the transaction structure is an obvious attempt to circumvent the *Faustpfandprinzip*. Therefore, the transfer of ownership to the LSP is necessary for compliance with Swiss laws.

The above illustration shows that the commercial laws of a jurisdiction and the level of enforcement determines the environment in which contracting occurs. Commercial law specifies the property rights associated with the commercial transaction, and enforcement of these rights determines the confidence of contracting parties in the contract. A jurisdiction's commercial laws should clearly define how a collateral lien can be perfected, how collateral priority is determined, and how notification of a lien is made. The "World Bank Doing Business - Measuring Business Regulations" publishes a Getting Credit score for countries by measuring the legal rights of borrowers and lenders with respect to secured transactions.<sup>19</sup>

## **5. Visibility, Competition and Collaboration in Supply Chains to Enhance SCF**

In the Swiss Post example, the LSP linked the cargo to the purchase order, which resulted in efficient financing of the supply chain. Swiss Post could execute this SCF solution as the setting was national and it had both in-house logistics and financial

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<sup>17</sup> Swiss Post that offers both logistics and financial services teamed with P&G to offer the above-described SCF programme in Switzerland. See Erik Hofmann, (2009), "Inventory financing in supply chains: A logistics service provider-approach", International Journal of Physical Distribution & Logistics Management, Vol. 39 Iss 9 pp. 716 - 740, <http://dx.doi.org/10.1108/09600030911008175>

<sup>18</sup> See Wyss, L., The pledge of moveable property in secured financing transactions, Walder Wyss & Partners, NewsLetter No.78 June 2008, <https://www.walderwyss.com/publications/513.pdf>

<sup>19</sup> World Bank, Doing Business, Measuring Business Regulations, <http://www.doingbusiness.org/methodology/getting-credit>

services that provided the visibility and financial strength to offer competitive financing solution. This may not be true for most LSPs and therefore it would be reasonable to expect that they cooperate with banks to combine visibility and financial strength.

### 5.1. Collaboration to Increase Visibility and Reduce Risk

Banks find lending to SMEs costly and risky than lending to MNCs. Transaction costs in terms of administration and monitoring are higher, information less transparent and, moreover, the availability of adequate collateral for covering small firms' higher default risk is limited.<sup>20</sup>

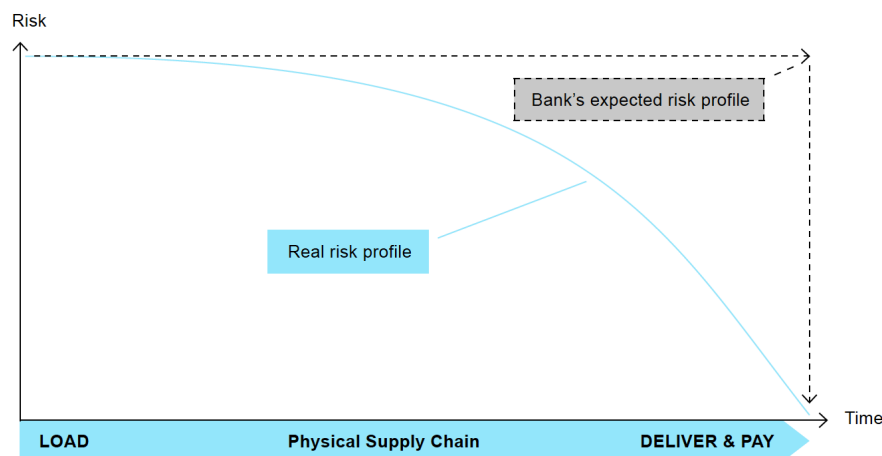


Figure 1: The real risk profile of the supply chain vs. the one expected by the bank.<sup>21</sup>

Figure 1 above shows that a bank determines the fee based on the expected risk profile of the physical supply chain. The blue line shows that a more competitive fee can be charged if the bank has more information available to adjust its risk profile as the physical supply chain evolves. The LSPs hold such information that they can share with banks and create value.

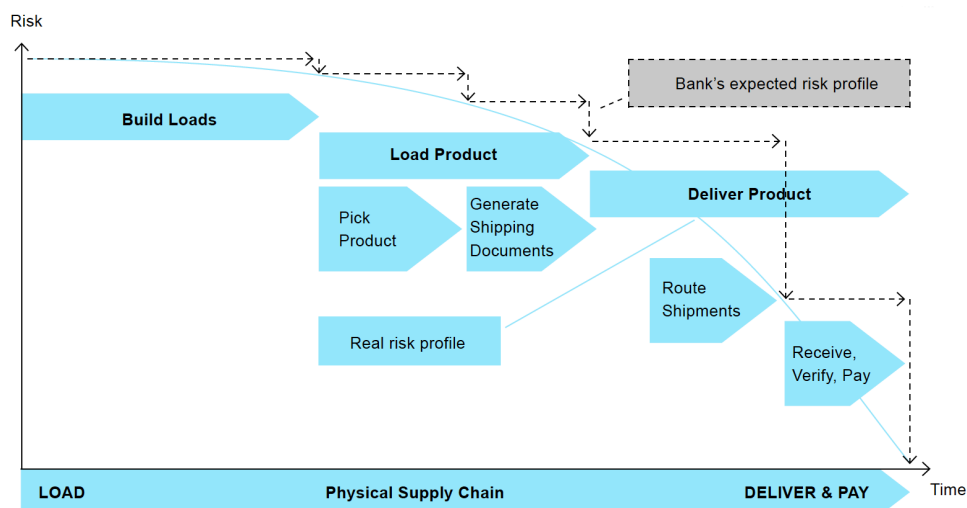


Figure 2: Making the real risk profile of the supply chain visible.<sup>22</sup>

<sup>20</sup> *Supra*, note 11.

<sup>21</sup> Bryant, C., Camerinelli, E., “Supply Chain Finance: Euro Banking Association European market guide”, version 2.0, June 2014, p. 80, [https://www.abe-eba.eu/downloads/knowledge-and-research/1406\\_EBA\\_Supply\\_Chain\\_Finance\\_European\\_Market\\_Guide\\_Second\\_edition.pdf](https://www.abe-eba.eu/downloads/knowledge-and-research/1406_EBA_Supply_Chain_Finance_European_Market_Guide_Second_edition.pdf)

Figure 2 above shows that information can be used to reduce the fee that a bank charge, not because risk is reduced but because it is more accurately priced. Therefore, the LSPs can be seen as valuable partners by banks and financial institutions to make SCF event-driven.

## **5.2. Collaboration on a Collective Basis is the Future of SCF**

A supply chain covers the entire chain, starting from the first supplier to the end customer. This is not a serial process but a complex, inter-related network of partners, suppliers, contract manufacturers, packers, resellers, etc. The focus of SCF is on creating liquidity in the supply chain through various buyer or seller-led programmes. However, current programmes are restricted in certain portions of the chain. To encourage the development of SCF programmes across the entire chain, it is necessary to have both competition and collaboration between various market participants in the SCF space. As competition intensifies between participants, collaboration would be the key to deliver a successful programme. Collaboration between banks, alternative financiers, LSPs, etc., increases the possibility of electronic exchange of purchase orders, shipping and delivery documents, invoices, etc. across trusted and reliable B2B networks.

One possible way forward is to create a four-corner model such as the BPO that will promote collaboration between business entities on a bilateral basis through partnerships or commercial contracts, technical outsourcing, and cooperation with B2B networks. But, this is a closed model and entails high investment for both the banks and the clients. Another possibility is that market participants collaborate on a collective basis by focussing on their core area of competence for overall market development and also to benefit individually. This is an open model based on peer-to-peer approach which would allow increased potential for risk distribution with other financing partners, higher scalability and potential for market penetration, and additional sources of funding for businesses. This would also give rise to joint-industry initiatives in the areas of regulation, standards, and infrastructural development. However, there are challenges that include increased commercial and operational complexity, technical interdependency and the need for well-defined standards, and friction between market players over revenue sharing.<sup>23</sup>

## **6. UNCITRAL Instruments can Advance SCF**

Several international instruments may be necessary to promote SCF throughout the supply chain. However, the various instruments will have different objectives – whether a fiduciary purpose, the promotion of international trade, or other socio-economic policies. This paper argues that efforts of UNCITRAL, namely, the draft Model Law on Electronic Transferable Records, the Rotterdam Rules, the Model Law on Secured Transactions, the on-going deliberations at Working Group I on the draft legislative guide on an UNCITRAL limited liability organization, and the deliberations at Working Group IV on contractual aspects of cloud computing and the legal issues related to identity management and trust services, can increase visibility in global supply chains.

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<sup>22</sup> *Ibid.*, p. 82

<sup>23</sup> *Ibid.*, p. 111



## 6.1. Electronic Records to Promote Dematerialised Information Exchange

Large enterprises see value in using electronic data interchange provided by large LSPs, such as DHL or UPS. These large logistics service providers have their enterprise resource planning (ERP), transport management and logistics systems that are connected to the ERP system of the large enterprise at one end and with customs and port authorities interface on the other end. Generally, SMEs do not have advanced internal ERP systems and do not use the services of such large logistics service providers. They continue to use a mix of electronic and paper based information and documentary exchange, which puts them at a competitive disadvantage vis-à-vis the large enterprises. Moreover, SCF is not efficiently extended to SMEs as they are outside the range of electronic visibility.

In 2008, the United Nations General Assembly adopted the Rotterdam Rules.<sup>24</sup> One of the objectives of the Rotterdam Rules is to facilitate e-commerce by establishing a legal framework for electronic bills of lading.<sup>25</sup> The provisions on electronic transport records in chapters 3 and 8 of the Rotterdam Rules are specifically designed to fill the gap in the area of carriage of goods in relation to e-commerce. The Rules also contain three separate chapters dealing with delivery of the goods, the rights of a controlling party, and the transfer of rights,<sup>26</sup> which may serve as a way to solve the problem of how to provide for negotiable electronic transport records.<sup>27</sup> The Rules has not yet entered into force and therefore the provisions are not currently in use.

To promote electronic communications in international trade and also support the Rotterdam Rules, UNCITRAL Working Group IV on Electronic Commerce in November 2016 finalized the Model Law on Electronic Transferable Records.<sup>28</sup> This Model Law aims to facilitate dematerialization of all paper-based transferable documents or instruments that allow to claim the payment of a sum or the delivery of goods.<sup>29</sup> One of the difficult issues that this Model Law will resolve relate to the requirement of physical possession of the paper document. Article 10 of the Model Law provides a functional equivalence rule for the possession of a transferable

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<sup>24</sup> The principal goal underlying the development of the Rules is the creation of a modern and uniform law concerning the international carriage of goods by sea, in order to reduce transaction costs, increase predictability and stability, and engender greater commercial confidence in international maritime commerce. The Rotterdam Rules have so far received 25 signatures and 3 ratifications, by a mix of developing and developed countries, including strong seafaring and trading nations, as well as traditional carrier and shipper nations. See “Status of the Rotterdam Rules” [http://www.uncitral.org/uncitral/en/uncitral\\_texts/transport\\_goods/rotterdam\\_status.html](http://www.uncitral.org/uncitral/en/uncitral_texts/transport_goods/rotterdam_status.html). Pursuant to article 94, the Convention requires ratification or accession by at least 20 states to enter into force.

<sup>25</sup> The Rotterdam Rules uses the term “negotiable transport documents” to refer to bills of lading and the term “non-negotiable transport documents” to refer to sea waybills. The Rules uses the term “electronic transport records” to refer to the electronic equivalent of bills of lading.

<sup>26</sup> Chapters 9, 10 and 11 of the Rotterdam Rules.

<sup>27</sup> For a detailed discussion see van der Ziel, G. J., “Delivery of The Goods, Rights Of The Controlling Party And Transfer Of Rights”, *Journal of International Maritime Law* 14: 606, (2008). See also, Basu Bal, A., Electronic Transport Records: An Opportunity for the Maritime and the Logistics Industries. *Journal of Transportation Law, Logistics and Policy* 81(1): 37, (2014).

<sup>28</sup> *Supra*, note 4.

<sup>29</sup> An indicative list of transferable documents or instruments includes: bills of exchange, cheques, promissory notes, consignment notes, bills of lading, warehouse receipts, cargo insurance certificates and air waybills.

document or instrument. Functional equivalence of possession is achieved when a reliable method is employed to establish control of that record by a person and to identify the person in control. The notion of control when used as a substitute for possession requires a reliable method for identifying the current party in control of a specific electronic record as the said notion typically focuses on the identity of the person entitled to enforce the rights embodied in the electronic transferable record.<sup>30</sup> The method of identification may be accomplished through a closed system<sup>31</sup>, or through an open system<sup>32</sup>. Under the draft model law, the notion of original and uniqueness has been connected to control. Emphasis has been given to reliably ensure that the claim may be presented to the debtor only once.<sup>33</sup>

## 6.2. Industry Standards as a Governance Technique

Limited international legislation in an area often makes the market adopt private standards to create trust among participants. International institutions in their attempt to keep up with technological and industry convergence may align their instruments to voluntary standards. A small but potentially significant inclusion of such a provision that refers to industry standards in an international instrument is article 12(a)(vii) of the UNCITRAL Draft Model Law on Electronic Transferable Records. This article that deals with “general reliability standard” provides that:

For the purposes of articles 9, 10, 11, 13, 17, 18, and 19, the method referred to shall be:

(a) As reliable as appropriate for the fulfilment of the function for which the method is being used, in light of all relevant circumstances, which may include:

...

(vii) Any applicable industry standard; or ...

In the above provision, firstly, it is to be noted that the word ‘may’ is an option and should not be read as an empowering formulation. Secondly, the wording ‘any applicable industry standard’ does not clarify what industry the standards are referring to and who in that industry will set the standards. Neither does it say whether the industry is composed of its participants, or is it some kind of a regulatory body. It may well be that the standards referred to in the article are the one agreed and adopted in a relevant industry. Such industry based mechanism for setting standards may be favoured in cases where public sector bodies do not have the necessary technical knowledge and where existing incumbents in the industry have a strong interest in influencing the development of standards. For example, bills of lading standards may be developed by the maritime industry; and trade finance standards may be developed by the banking industry. Thus, accepted standards are the ones that are recognised in the industry within which the parties to the transaction operate. However, if a supply chain view were to be adopted, it would be difficult to restrict the definition of the

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<sup>30</sup> See draft article 9, *supra*, note 4.

<sup>31</sup> The closed system includes the token model “which identifies the person in the record itself” and the registry model “which identifies the person in a separate registry.” UNCITRAL, “Legal issues relating to the use of electronic transferable records”, A/CN.9/WG.IV/WP.115, (2011).

<sup>32</sup> The open system is decentralised and uses block chain token which does not identify the holder in the record, i.e. in the token itself. A block chain ledger displays the addresses in which tokens are kept, the addresses are cryptographic identities (pseudonyms), and the private keys corresponding to the addresses are secret. See Takahashi, K, “Blockchain Technology and Electronic Bills of Lading”, *Journal of International Maritime Law* 22: 209 (2016).

<sup>33</sup> See draft Article 11, *supra*, note 4.

accepted standards based on the participants of the relevant industry, because new peers might be coming in from different industries.

Be that as it may, it is not impossible to impose standards, and that in due course it can be ensured that the standards are set in a fair way so that the newcomers to the market would not be precluded. Technological and industrial convergence has made it necessary for policymakers to cooperate and deliberate more horizontally, as the core of digitization is networking. International institutions should work closely with private standard setting entities, as it is increasingly relevant to rely on private standards created by highly specialized professionals. It is submitted that voluntary standards may emerge as a governance technique to regulate trade in the digital era and industry associations can play an important role in formulating such standards.

### **6.3. Model Law on Secured Transactions to Promote Credit Availability**

The UNCITRAL Model Law on Secured Transactions is based on the UNCITRAL Legislative Guide on Secured Transactions. The Model Law is intended to assist States in developing modern secured transactions laws with a view to promote the availability of credit. Taking a security interest enables a creditor to have priority over competing creditors if the debtor files bankruptcy. The Model Law is developed as concise text, to be used as tool for implementation of the Guide's recommendations and setting out a regime for secured transactions in 107 Articles plus 33 Model registry provisions. Many of the solutions provided in the Model law are inspired by Article 9 of the US UCC, which governs security interests and applies to any transaction that creates a security interest in personal property.

The Model Law provisions integrate the treatment of all transactions fulfilling a security function and the replacement of a wide range of security devices with a single concept, the security interest. Under the Model Law a security interest can be made effective against third parties by registration, by the taking of possession or, in the case of financial collateral, the taking of control. The notice filing through registration can be done in advance of the security being created, so that the register is then a warning that a security has been or may be taken. Only one filing is required for all transactions between the same parties involving the same kind of collateral. The priority rules of the Model Law are designed to produce a commercially reasonable outcome for typical disputes. Filing is a priority point, in that priority between security interests generally depends on the date of perfection.

### **6.4. Increase Visibility for SMEs by Reducing Information Asymmetry**

Information asymmetry has been a challenge for small and medium businesses when they seek finance to fuel their growth. Since the 1960s, private sector finance has played an increasingly critical role in driving economic growth. However, lesser disclosure requirements and often, shorter formal trading history make it harder and more expensive for investors and financiers to acquire the required information to make accurate assessments about creditworthiness. As a result, SMEs continue to find it hard to get the finance they need to participate in the formal economy. Also, stringent banking regulations have further excluded SMEs through KYC and AML requirements.

Lack of visibility prevents SMEs from providing the information required by banks to grant access to debt. Also, SMEs are not able to signal to the trading partners their quality as suppliers. For the past several years, regulators around the world have recognized that jurisdictional disclosure and registration measures need to be redesigned to encourage SME trade participation and boost economic growth. Several options have been designed in various parts of the world to break down information asymmetry at the outset of market entry.

UNCITRAL Working Group I is currently deliberating on legal issues surrounding the simplification of incorporation and to good practices in business registration, both of which aimed at reducing the legal obstacles encountered by SMEs throughout their life cycle. It is submitted that this initiative along with other initiatives such as a global identifier system can increase visibility and enhance the chances of funding for SMEs.

### **6.5. Liability Rules on Cloud Computing and Identity Management Necessary for Collaboration on a Collective Basis**

In November 2016 UNCITRAL WG-IV started its deliberations on cloud computing, identity management and trust services. For banks the identity of the counterparty is of fundamental importance as it is necessary for verifiability and other regulatory reasons, such as KYC and AML requirements. There are several legal concerns for the identity provider, relying party and the user/data subject. Major among them is liability. Other concerns may relate to data integrity, e-contracts and e-signatures, cyber security law, privacy and data protection law, dispute resolution, etc. Since the deliberations have just started there is room for much discussion on this subject in the near future.

## **7. Concluding Remarks**

The expansion of SCF programmes throughout the supply chain has to be supported by a robust legal framework. It will result in greater financial inclusion, with the potential to raise SME visibility to improve confidence and transactional efficiency, freeing up capital and other resources to invest in productive output.

With the exception of the WTO Trade Facilitation Agreement<sup>34</sup> entering into force on 22 February 2017, the multilateral trade negotiations are moving at a glacial pace. The new business realities such as digital trade and global value chains need quick action from policymakers. Multilateral initiatives are possibly not well suited to deliver for digital trade in the short run, as many States do not want to commit themselves to such evolving areas without fully understanding the implications. The need for SCF to support SMEs is an immediate problem. Therefore, private law solutions will dominate in the short run and UNCITRAL is possibly the most suited institution to create harmonized laws that can facilitate SCF. The UNCITRAL instruments and initiatives discussed above are new and therefore it can be hoped that States will soon start using them in creating or updating their national legislation.

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<sup>34</sup> WTO, “Agreement On Trade Facilitation”, 15 July 2014, WT/L/931, [https://www.wto.org/english/tratop\\_e/tradfa\\_e/tradfa\\_e.htm](https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm)

The use of financial technology can provide opportunity for the next wave of global growth to come from a facilitative approach to law making, combined with an appreciation of how information can be used to achieve positive outcomes. It creates an important opportunity for policymakers, working together, to deliver highly usable policy outcomes and provide benefits for collaboration between the physical and financial layers of the supply chain.