

International Economic Law Clinic

TRADE FINANCE DIGITALIZATION:

Scaling the Adoption and Implementation of Enabling Frameworks

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Executive Summary

Legal Instruments Under the United Nations Framework

- The model laws developed by the United National Commission on International Trade Law (UNCITRAL) represent a holistic legal framework that guarantees judicial consistency. In order to ensure *certainty and predictability* in trade finance digitalization, it is recommended that states adopt holistic frameworks like the UNCITRAL model laws.
- The International Institute for the Unification of Private Law (UNIDROIT) Digital Assets project provides an expansion to the UNCITRAL model laws by covering access to secondary markets and a wide range of financial tools. This addresses a significant limitation of the Model Law on Electronic Transferable Records (MLETR), which is limited to documents that have a paper equivalent. The UNIDROIT project considers documents existing solely in an electronic environment and does not impose restrictions on their use in financial products.

Regional and bilateral/trilateral Legal Instruments

- In the last decade, more and more states recognized the importance of electronic transferable records. Notably, Singapore updated the traditional domestic regulatory framework clause by explicitly referring to the MLETR in bilateral/trilateral digital trade or partnership agreements. Followed by other trade hubs, such as Australia and the United Kingdom (UK), this legal innovation may have network effects around the globe.
- Recommendation on domestic regulatory framework clauses: regional and bilateral/trilateral agreements shall explicitly refer to the MLETR. If negotiating states cannot accept a clause directly pointing to the MLETR, a semi-open clause¹

¹ Generally, a semi-open clause is a domestic regulatory framework clause in a treaty which allows member states to consider applicable international legal instruments at their discretion when establishing or maintaining their domestic regulatory frameworks.

could be a suboptimal option by retaining the possibility for the future introduction of the MLETR into a treaty.

- Recommendation on paperless trading clauses: expand the scope of paperless trading clauses in regional agreements by using “trade-related documents” instead of “trade administration documents” to cover commercial trade documents, including electronic transferable records.
- Recommendation on practical solutions: proactively propose practical solutions to popularize electronic transferable records and use regional and bilateral/trilateral agreements to create an enabling regulatory framework for these solutions.

Legal Instruments Under the World Trade Organization (WTO) Framework

- The best practice for negotiators would be to reference explicitly the MLETR in WTO negotiating texts. Accepting prior UN-model law as a starting point for WTO negotiations would help in promoting the equitable treatment of electronic information and facilitating electronic transactions. The widely adopted MLEC and MLETR serve as a solid foundation for developing e-commerce negotiations within the WTO.

Key Findings in Case Studies

- United Arab Emirates: The Abu Dhabi Global Market (ADGM) provides a valuable model for jurisdictions implementing legislation facilitating the digitization of trading documents. ADGM's efforts are exemplified by a pilot project using the TradeTrust platform on the Ethereum blockchain. This platform demonstrates the UAE's commitment to exploring and adopting newer technologies and platforms for digital trade. Gas fees and the inability to modify processed documents remain as challenges to scale the use of the platform.
- The UK: The Electronic Trade Documents Bill (the “Bill”) has recently entered into force. The Bill is generally consistent with the MLETR, while some clauses were tailored to the law of England and Wales. The primary legal breakthrough of the Bill is the recognition of *possession of intangibles*. Previously, English common law did not recognize the possession of intangibles, but the Bill goes

beyond this tradition. Other common law jurisdictions could take the Bill as a reference to establish their regulatory framework on electronic transferable records.

I. Introduction

This report aims to examine international and national legal instruments allowing for the digitalization of trade finance-relevant documents. Such documents include, but are not limited to *bills of lading*, *letters of credit* and *promissory notes*. This report will act as a best-practices guide to both individual countries as well as private sector actors wishing to engage with the digitalization of trade finance-relevant documents. Moreover, the research will highlight the conditions leading to the adoption and the implementation of these legal instruments as well as continuing challenges.

II. Global Development of Legal Instruments on Digitalization of Trade Finance-relevant Documents

First, we briefly summarize the historical development of agreed international instruments that govern the digitalization of trade finance. The most recent UNCITRAL Model Law on Electronic Transferable Records (“**MLETR**”) and the UNIDROIT Digital Assets and Private Law Project (the “**Project**”) represent important milestones in the digitalization of trade finance-relevant documents and other digital assets.

Beginning in the 1970s, the UN and its organizations recognized and sought to expand the adoption of digitalization of international trade. UN conventions and UNCITRAL model laws covering digital trade are featured chronologically in the table below.

Table 1. International instruments and frameworks governing trade finance-relevant documents

UN Convention	Ratification	Relevant Articles	Relevant Documents
United Nations Convention on the Carriage of Goods by Sea (1978) (the “ Hamburg Rules ”)	35 states	Article 14	Bill of lading
United Nations Convention on Independent Guarantees and Stand-by Letters of Credit (1995)	8 states	Article 7	Letters of Credit and Independent Guarantees
United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea (2008) (the “ Rotterdam Rules ”)	25 states signed, 5 ratified. (Not enter in force.)	Articles 8,9 and 10	Accounts for cross-border maritime carriage documents
UNCITRAL Model Laws	Adoptions	Relevant Articles	Relevant Documents
Model Law on Electronic Commerce (1996)	83 states and 164 jurisdictions	Articles 1, 7, 8, 9, 16 and 17	Many trade finance-relevant documents
Model Law on Electronic Signatures (2001)	38 states and 39 jurisdictions	Articles 6,7,8, 9 and 12	Validation of signatures and recognition of cross-border certificates
Model Law on Electronic Transferable Records (2017)	7 states	Articles 6,7,8,9,10,12,14,16 and 17	Electronic transferable records
Other documents	Status	Relevant Contents	Relevant Documents
UNIDROIT Digital Assets and Private Law Project	Adopted by UNIDROIT Governing Council	Entire document	Electronic records that have a paper equivalent and that exist solely in an environmental space. All types of investment instruments including securities and bonds.

A. UNCITRAL Model Laws

1. Model Law on Electronic Communication (1996)

The MLEC was adopted by the UN in 1996. It consists of two principal sections. The first part concerns electronic commerce in general and the second part deals with specific areas, such as the carriage of goods and transport documents. In Article 1, the

MLEC provides a flexible threshold that encompasses all types of electronic information. In particular, the MLEC “applies to *any kind of information* in the form of a data message used in the context of commercial activities [emphasis added]”.²

Chapter II of the MLEC applies to documents specifically used in the transport of goods. Its scope is envisioned to apply to the following and more: letters of credit, promissory notes, bills of lading, contracts and invoices. States that have adopted the MLEC in their domestic legislation would accept “any kind of information” communicated over electronic means if it satisfies certain conditions. In certain cases, this encompasses securities for which the paper documents no longer exist and SMS messages.³

The acceptance of “any kind of information” depends on satisfying several security-related aspects. The first aspect related to the issue of identifying transaction parties. In cases regarding paper-based document, identification may depend on signatures in written form. In order to solve that problem, Article 7 is envisioned to accommodate the lack of signature issue. The signature condition is met if “a method is used to identify that person and to indicate that person’s approval of the information contained in the data message” or if “that method is as reliable as was appropriate for the purpose for which the data message was generated or communicated”.

2. Model Law on Electronic Signatures (2001)

The second adopted model law that could facilitate trade finance is the Model Law on Electronic Signatures (“MLES”) which was negotiated in 2001. It has been adopted in 38 states and 39 jurisdictions. While it does not directly mention any trade finance-relevant document, it acts as a support pillar for other relevant model law. To this end it recognizes the work of service providers and introduces their duties and obligations.⁴ For example, it is the duty of the signatory to exercise “reasonable care” to avoid unauthorised use. If unauthorised use took place, it is the responsibility of the

² Article 1, MLEC.

³ Banco Caja Social S.A. v. Gloria Aleida Herrera Arango and Carlos Andrés Ochoa Londoño 8 July 2020 in Clout report CN.9/SER.C/ABSTRACTS/128.

⁴ Article 8 and 9, MLES.

signatory to use either the services provided by the signature provider or any other efforts to notify parties affected by the signature.

The MLES also introduced the principle of technological neutrality. Technological neutrality guarantees that service providers will be treated the same despite the technological differences they may have. Articles 9 and 10 govern the model laws' treatment of service providers. Another important addition in this model was the introduction of Article 12 recognizing foreign certificates. That addition can facilitate cross-border trade in jurisdictions that previously had limited the application of model laws to only domestic transactions.

3. Model Law on Electronic Transferable Records (2017)

The most significant development advancing the cause of digitization of trade documentation is the 2017 UNCITRAL Convention on the Model Law on Electronic Transferable Records. MLETR aims to address service providers, cross-border trade as well as the element of exclusive control. It allows for the use of documents as collateral to acquire finance through instruments such as factoring and forfeiting. However, it does not include the trading of those documents in derivatives or money markets (as well as any financial products). The MLETR has been adopted by 7 states (Annex I).

The MLETR allows for electronic documents/information to receive the same treatment as written documents if they meet certain conditions (Article 8). Those conditions deal with the chain of custody of any specific digitalized document. Article 10 makes direct mention of “singularity” and “uniqueness” of the documents in order to guarantee the security of transactions against duplications of documents and fraud. For a document to be accepted in digital form, it must be unique. Any technological innovation would have to guarantee that only certain individuals have access to the document and could take actions including duplication.

The general reliability standard in Article 12 adds two criteria that could be used to reaffirm integrity and security of electronic records. Firstly, through the existence of an external independent auditor who would be able to conduct regular and extensive examination of the security systems in place. Secondly, it envisions the existence of a

regulatory body that would either provide accreditation to service providers or provide specific rules concerning reliability of security systems.

Article 14 deals with legal issues that may arise if the storage and service provider responsible for the electronic records is in a different geographic location. This is particularly interesting if and when the place of business might be impacted by cross-border trade. It specifies that, if a party uses electronic transferable records in a different location, that “does not create a presumption that its place of business is located in that country”.

In Articles 17 and 18 of the MLETR, an electronic transferable record is interchangeable with its paper version. The change must be conducted using a reliable method. Furthermore, in either case it should be noted in each document that change has occurred, and the date of change has to be recorded. Article 19 covers the recognition of electronic transferable records in cross-border trade. A record issued in a different jurisdiction may not be denied legal validity in another jurisdiction on the basis of its issuance or its medium (paper-based or electronic).

The MLETR follows the principle of technological neutrality, allowing for the acceptance of every technological development that meets certain security requirements. It does not discriminate between service providers using a central registrar, blockchain or another distributed ledger technology (DLT). However, it has to be noted that the MLETR does not apply in jurisdictions that do not allow for the transfer of certain instruments such as letters of credit.⁵ In addition, the MLETR does not apply to electronic transferable documents existing solely in an electronic environment.⁶

Moreover, enacting jurisdictions may opt to exclude from scope of application the MLETR documents that are governed by the following conventions: the Convention Providing a Uniform Law for Bills of Exchange and Promissory Notes (Geneva, 1930) and of the Convention Providing a Uniform Law for Cheques (Geneva, 1931) (together,

⁵ MLETR, 25.

⁶ *Ibid.*

the “**Geneva Conventions**”).⁷ Those records would neither fall under the Geneva Convention nor the UNCITRAL model law.⁸

4. Analysis and Summary

The UN conventions do not offer the possibility of a direct and wide implementation of digital trade finance. However, they provide relevant articles that legislators could adopt in national jurisdictions that could facilitate the use of digital trade documents writ large.

The most recent international convention dealing with digital trade finance-relevant documents is the 2005 Rotterdam Rules, which have not yet been sufficiently adopted by nations to bring it into force. Previous conventions reference trade finance-relevant documents, but they were drafted in the 20th century. In conclusion, in their totality, the UN conventions do not provide the basis for a system that guarantees predictability and certainty necessary for international trade.

The UNCITRAL model laws represent a better alternative: a holistic legal framework that guarantees predictability and certainty. It focuses on what really matters for states and investors: judicial consistency in cross-border transactions.

Closing the 2 trillion-dollar trade finance gap is not an easy task. Enterprises would require access to a large pool of financial markets and tools. While the MLETR does provide an ability to leverage electronic trade finance-relevant documents, it does not address other financial tools. States wishing to engage with both primary and secondary markets could borrow from the newly developed principles by UNIDROIT.

The 2017 MLETR considered electronic records that existed only in an electronic environment to be out of its scope. Furthermore, it did not provide for the

⁷ In theory, states would be able to recognize electronic transferable records existing only in an electronic environment while being parties to the Geneva Conventions. However, the Geneva Conventions did not conceive a functional equivalency especially because they were drafted in the 1920-30s. What they do stipulate are different forms for cheques that should be accepted. Those forms have to include different types of information. Other solutions are therefore needed to allow for electronic documents existing solely in an electronic environment while maintaining all the relevant security options provided in MLETR, e.g. the UNIDROIT Digital Assets and Private Law Project.

⁸ *Ibid.*

use of electronic records when it concerned investment bonds, securities or other financial products. What it has enabled in reference to trade finance is the use of an electronic transferable record as a collateral to acquire finance. If the digitalization of trade is widespread, merely using the electronic documents would enable access to a considerable amount of trade finance globally across different markets. In sum, there continue to be gaps in the disciplines that preclude the full operation of all electronic transferable records.

B. Future Outlook: UNIDROIT Digital Assets and Private Law Project

There continue to be attempts in other fora to address the gaps precluding a wide-spread digitization of trade documents. Beginning in 2015, UNIDROIT negotiators started examining the possibility of creating model laws to address legal solutions leading to the recognition and adoption of “digital assets”. The negotiation for the final document was concluded in May 2023. The final document surpasses the previous UN instruments in addressing electronic records that do not have a paper-based equivalence.

This subsection will briefly introduce the recent developments adopted by the working group in 2023. First, it will highlight the rationale behind the Project. Second, it will analyse how the project’s principles are envisioned to be applied.

The UNIDROIT “Digital Assets and Private Law” working group borrowed certain principles from the UN instruments. Firstly, they adopted a technology neutral approach. While the principles often use illustrations that emphasise the use of blockchain, this is only used for providing clear examples. The proposed principles do not favour any specific technology or business model.

Second, the newly developed principles are both “jurisdiction” and “organizational” neutral. They do not favour a specific legal system or culture. In that sense, the common understanding of “control” in common law or “possession” in civil law differs from what is adopted in this model. Finally, it must be noted that the principles deal specifically with private law relationships of acquisition and disposition.

It does not address regulatory concerns such as who is licensed to buy a digital asset or how they may hold those assets.

Principle 2 differentiates between “control” and “propriety rules”. In the case of transfer in digital assets, one might transfer the rights to use that asset to another party while maintaining control. For example, a token is created as a security for a commodity. The owner of the commodity might transfer their rights for the profit of that commodity while retaining control of it. In that case, the token transferred is a set of ownership rights that enable an investor to acquire interests. This arrangement differs from the use of the commodity itself as a collateral.

Certain digital assets are often linked to other assets. This may include the use of stable coin, whereby the coins are pegged to a certain currency or other specific assets. Principle 4 recognizes that connection, in relation to stable coins, but also to securities. Furthermore, it recognizes that the other asset or both assets might be either tangible or intangible. Any transfer of ownership must include both assets. In some cases, a digital asset may be created based on another digital asset. The redemption of the secondary asset would lead to forgoing of the primary asset. In this case the primary would only be a “wrapped” asset to quote the principles of the law. In another example where a token would represent physical gold, the transfer does not require the physical transfer of the gold, but merely the legal rights to hold it.

If successful, these principles could enable the existence of secondary markets whereby the rights of ownership to commodities could be traded at digital exchanges. This would inject a greater amount of liquidity in international trade further bridging the 2 trillion-dollar gap in finance.⁹

⁹ *Ibid.*

III. Regional and bilateral/trilateral Legal Instruments on Digitalization of Trade Finance-relevant Documents

A. Regional Legal Instruments

1. Introduction

There are five major regional agreements that contain clauses related to electronic commerce and paperless trading, as follows:

Table 2. Major Regional Agreements

Year ¹⁰	Regional Legal Instruments
Jan 2010	The Agreement Establishing the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) ¹¹
Dec 2018	Comprehensive and Progressive Agreement on the Trans-Pacific Partnership (CPTPP)
Jan 2021	Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific (CPTA)
Dec 2021	ASEAN Agreement on Electronic Commerce (AAEC)
Jan 2022	Regional Comprehensive Economic Partnership (RCEP) Agreement

The following table illustrates ratification status of each regional agreements by country as of May 2023:

¹⁰ The year when the agreement entered into force for the first group of states.

¹¹ On November 13, 2022, ASEAN, Australia and New Zealand announced the substantial conclusion of negotiations to upgrading the AANZFTA. More details see <https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/asean-australia-new-zealand-free-trade-agreement-aanzfta/upgrading-aanzfta/>.

Table 3. Ratification Status of Major Regional Agreements

Member States	AANZFTA	CPTA	CPTPP	AAEC	RCEP
Armenia		2017 (Signed)			
Australia ⁽¹⁾	2010 (EIF)		2018 (EIF)		2022 (EIF)
Azerbaijan		2018 (Accessed)			
Bangladesh		2020 (Ratified)			
Brunei Darussalam ⁽¹⁾⁽²⁾⁽³⁾	2010 (EIF)		2018 (Signed)	2020 (Ratified)	2022 (EIF)
Cambodia ⁽²⁾⁽³⁾	2011 (EIF)	2017 (Signed)		2020 (Ratified)	2022 (EIF)
Canada ⁽¹⁾			2018 (EIF)		
Chile ⁽¹⁾			2023 (EIF)		
China ⁽¹⁾		2020 (Approved)			2022 (EIF)
Japan ⁽¹⁾			2018 (EIF)		2022 (EIF)
Indonesia ⁽¹⁾⁽²⁾⁽³⁾	2012 (EIF)			2021 (Ratified)	2023 (EIF)
Iran		2020 (Ratified)			
Laos ⁽²⁾⁽³⁾	2011 (EIF)			2020 (Accepted)	2022 (EIF)
Malaysia ⁽¹⁾⁽²⁾⁽³⁾	2010 (EIF)		2022 (EIF)	2020 (Ratified)	2022 (EIF)
Mexico ⁽¹⁾			2018 (EIF)		
Mongolia		2022 (Accessed)			
Myanmar ⁽²⁾⁽³⁾	2010 (EIF)			2019 (Ratified)	2022 (EIF)
New Zealand ⁽¹⁾	2010 (EIF)		2018 (EIF)		2022 (EIF)
Peru ⁽¹⁾			2021 (EIF)		
Philippines ⁽¹⁾⁽²⁾⁽³⁾	2010 (EIF)	2019 (Accessed)		2021 (Ratified)	2023 (EIF)

Republic of Korea ⁽¹⁾		2022 (Accessed)			2022 (EIF)
Singapore ⁽¹⁾⁽²⁾⁽³⁾	2010 (EIF)		2018 (EIF)	2019 (Ratified)	2022 (EIF)
Tajikistan		2022 (Accessed)			
Thailand ⁽¹⁾⁽²⁾⁽³⁾	2010 (EIF)			2019 (Ratified)	2022 (EIF)
Timor-Leste		2022 (Accessed)			
Turkmenistan		2022 (Accessed)			
Tuvalu		2022 (Accessed)			
Vietnam ⁽¹⁾⁽²⁾⁽³⁾	2010 (EIF)		2019 (EIF)	2019 (Approved)	2022 (EIF)

(1) EIF = enter into force

(2) Member states of the Asia-Pacific Economic Cooperation (APEC).

(3) Member states of the Association of Southeast Asian Nations (ASEAN).

2. Key Clauses Facilitating Digitalization of Trade Finance-relevant Documents

a) Clauses regarding Domestic Regulatory Frameworks

The five regional agreements analysed include a general clause encouraging the adoption of domestic regulatory frameworks governing electronic transactions or paperless trade. Such regulatory frameworks are the legal basis for adoption of domestic legislation digitalizing trade finance-relevant documents. The wordings of domestic electronic regulatory framework clause in each regional agreement are to some extent different and can be categorized into three models:

(1) Closed model

Regional agreements that use the closed model, like the AANZFTA and CPTPP, require member states to establish domestic regulatory frameworks *only* according to *specific* legal instruments. This means that the scope of legal instruments that member states shall consider for establishing domestic regulatory frameworks is

strictly limited, namely “closed”. In fact, the MLEC and CUECIC are the only two legal instruments explicitly mentioned in these agreements, while any other potentially relevant legal instruments, whether existing or future ones, are not covered.

Example: Article 4 (Domestic Regulatory Frameworks), AANZFTA

Each Party shall maintain, or adopt as soon as practicable, domestic laws and regulations governing electronic transactions taking into account the UNCITRAL Model Law on Electronic Commerce 1996.

(2) Semi-open model

The clauses under the semi-open model tend to take more legal instruments into consideration – not only the MLEC or CUECIC, but also other applicable international conventions and/or model laws relating to electronic commerce.¹² The AAEC and RCEP fall into this category, and we regard the domestic regulatory framework clause of RCEP as a best practice. As highlighted below, the clause includes 1) a minimum standard for domestic regulatory frameworks (*i.e.*, MLEC or CUECIC) and 2) states’ margin of discretion to incorporate other international legal instruments in domestic law beyond the minimum standards. Thus, the MLETR might be an applicable model law and taken into consideration by member states under this clause.

Example: Article 12.10 (Domestic Regulatory Framework), RCEP

1. Each Party shall adopt or maintain a legal framework governing electronic transactions, taking into account the *UNCITRAL Model Law on Electronic Commerce 1996*, the *United Nations Convention on the Use of Electronic Communications in International Contracts* done at New York on 23 November 2005 [**the minimum standard**], or other applicable international conventions and model laws relating to electronic commerce [**states’ margin of discretion**].

(3) Open model

By contrast, the CPTA does not refer to any legal instruments. The member states are only *encouraged* to have domestic regulatory frameworks. In this model, a

¹² The similar expression can be found in Article 12 (Domestic Regulatory Framework) of the AAEC and Article 12.10 (Domestic Regulatory Framework) of the RCEP.

state can take the most updated legal instruments into its domestic regulation or take none at all (though unlikely). After all, the CPTA is merely a *framework agreement* on paperless trade.

Example: Article 6 (National policy framework, enabling domestic legal environment and paperless trade committee), CPTA

1. The Parties shall endeavour to establish a national policy framework for paperless trade, which may define targets and implementation strategies and allocate resources, and a legislative framework.

(4) Conclusion

In conclusion, we believe that the semi-open model (*i.e.* the model taken by the RCEP) is the most favorable model for clauses regarding domestic regulatory frameworks in regional agreements. Closed-model clauses cannot accommodate the latest developments of digital trade and will gradually lose their vitality, while open-model clauses have insufficient effects on member states. As other relevant legal instruments like MLETR emerge, semi-open clauses can be more vibrant and up to date.

3. Clauses regarding Paperless Trading

Almost all regional agreements analysed (except for the CPTA) include a “Paperless Trading” clause.¹³ Generally, these clauses require countries to *endeavor* to accept electronically submitted trade administration documents as the legal equivalent of their paper versions.

Theoretically, using electronic transferable records in trade finance shall be considered a component of paperless trading. However, in practice, the paperless trading clauses in regional agreements only apply to *trade administration documents*. *Trade administration documents* are generally defined as forms *issued or controlled by a state* which must be completed by or for an importer or exporter in relation to the

¹³ Chapter 10, Article 8 (Paperless Trading), AANZFTA; Article 14.9 (Paperless Trading), CPTPP; Article 7(1) (Paperless Trading), AAEC; and Article 12.5 (Paperless Trading), RCEP.

import or export of goods.¹⁴ As most trade finance-relevant documents are not issued or controlled by a state, they are not qualified as trade administration documents and hence not captured by paperless trading clauses.

The narrow definition in the paperless trading clauses precludes comprehensive usage and regulations of electronic trade documents in international trade. Such restrictive clauses are anathema to commercial reality. We thus believe that the scope of the paperless trading clauses must eventually be expanded to include trade finance-relevant documents. In this sense, the CPTA provides other countries with a best practice to follow.

As a regional agreement specifically aimed at facilitating cross-border paperless trade, the CPTA rejects the use of “trade administration documents” and instead adopts a new definition of “trade-related documents”. This latter phrase is significantly broader and more encompassing. As defined, it covers both commercial and regulatory documents required in commercial transactions.¹⁵

4. Recommendations

First, international agreements should incorporate semi-open clauses that could capture the latest legal instruments like the MLETR. Second, the scope of paperless trading clauses can be expanded from “trade administration documents” to the more all-encompassing “trade-related documents”.

B. Bilateral/Trilateral Legal Instruments

1. Introduction

Compared with regional legal instruments, far more dynamic development of digitization can be found in bilateral/trilateral legal instruments.

Table 4. Major Bilateral/Trilateral Legal Instruments

¹⁴ Chapter 10, Article 2(e), AANZFTA; Article 14.1, CPTPP; Article 1(k), AAEC ; and Article 1.2(dd), RCEP.

¹⁵ Article 3(e), CPTA.

Year ¹⁶	“Singapore pattern” Legal Instruments
2020 Dec	Singapore-Australia Digital Economy Agreement
2021 Jul	Digital Economy Partnership Agreement
2021 Dec	Australia-United Kingdom Free Trade Agreement
2022 Jun	Singapore-United Kingdom Digital Economy Agreement
2022 Nov	EU-Korea Digital Trade Principles (<i>non-binding</i>)
2023 Jan	Singapore-Korea Digital Partnership Agreement
2023 Jan	EU-Singapore Digital Trade Principles (<i>non-binding</i>)
Other Legal Instruments	
2020 Jan	United States-Japan Digital Trade Agreement
2020 Jul	United States-Mexico-Canada Agreement (USMCA)
2022 May	UAE-India Comprehensive Economic Partnership Agreement

2. Relevant clauses

From 2020 to 2023, Singapore signed four digital economy/partnership agreements (“DEA” or “DPA”) with different countries. All of them explicitly encourage the adoption of the MLETR under the clause of “Domestic Electronic Transactions Framework”.¹⁷ Since Singapore created the clause explicitly referring to the MLETR in international agreements, we name this the “Singapore pattern”.

¹⁶ The year when the agreement entered into force or the principle was concluded.

¹⁷ It is interesting that there are slight differences in the wording referring to the MLETR among the four Singapore DEAs. The Singapore-Australia DEA only requires both parties to “endeavour to take *into account, as appropriate*, relevant model legislative texts developed and adopted by international bodies, such as the UNCITRAL Model Law on Electronic Transferable Records (2017). [emphasis added].” While the other three agreements took a step further. The DEPA and the Singapore-Korea DPA require the states to “endeavour to *adopt* [emphasis added]” the MLETR; and the Singapore-UK DEA requires the states to “endeavour to establish a legal framework ... *consistent with* [emphasis added]” the MLETR. “Adopt” and “consistent with” are both stronger than “take into account, as appropriate”. To sum up, there is a tendency that the contracting states of later agreements will carry heavier treaty obligations to establish domestic regulatory frameworks based on the MLETR.

As for the wording difference between “adopt” and “consistent with”, it may be due to the fact that the UK, as a traditional common law country, preferred not to “adopt” the MLETR in its entirety. The UK Electronic Trade Documents Bill, which is consistent with the MLETR while tailored to English law, can be seen as evidence.

Thanks to the Singapore pattern in these bilateral/trilateral agreements, the influence of the MLETR has spread to major trading countries like Australia and the UK and may reach other big economies like China and Canada. States joining or planning to join the digital economy agreements may gradually adopt the MLETR in their domestic regulatory frameworks. In time, they could form an interoperative global regulatory network of electronic transferable records consistent with the MLETR.

At the Commonwealth Trade Ministers Meeting in June 2023, ministers agreed to establish a Legal Reform and Digitalisation Working Group to assist Commonwealth members in transitioning to paperless trade.¹⁸ More countries may take action and join the global ETR regulatory network in the near future.

Box I. Data Exchange System – TradeTrust

In the Singapore-Australia DEA, DEPA and Singapore-Korea DPA, there are similar clauses on developing data exchange systems to support the exchange of “electronic records used in commercial trading activities”.¹⁹ Based on these clauses, Singapore established TradeTrust, a blockchain-based digital utility with globally accepted standards to develop data exchange systems. TradeTrust aims to form globally accepted standards for endorsing, exchanging and verifying digital documents, including electronic transferable records.²⁰

Currently, TradeTrust has several pilots in different countries, including one contracting state (Australia) and non-contracting states (UAE/Abu Dhabi Global

¹⁸ “2023 Commonwealth Trade Ministers Meeting Paves the Way for an Inclusive and Sustainable Digital Transition,” The Commonwealth, accessed June 30, 2023, <https://thecommonwealth.org/news/commonwealth-trade-ministers-meeting-concludes-focus-fostering-inclusive-green>.

¹⁹ Article 12, Singapore-Australia DEA; Article 2.2, DEPA; and Article 14.12, Singapore-Korea DPA.

²⁰ “Digital Economy Agreements,” Ministry of Trade and Industry Singapore, accessed June 30, 2023, <https://www.mti.gov.sg/Trade/Digital-Economy-Agreements>; “General FAQs,” TradeTrust, accessed June 30, 2023, <https://www.tradetrust.io/faq/general-faq>.

Market, China and the Netherlands).²¹ TradeTrust has to compete with commercial alternatives provided by private companies, such as Bolero and essDocs.

3. Recommendations

Recommendation on practical solutions. We encourage states to proactively propose practical solutions to popularize electronic transferable records, and to include relevant clauses in regional and bilateral/trilateral agreements. For example, TradeTrust is one of the practical solutions provided by the Singapore Government to facilitate the transformation, endorsement and verification of electronic transferable records.

²¹ “News,” TradeTrust, accessed June 30, 2023, <https://v2.tradetrust.io/news>.

IV. WTO Negotiations on E-Commerce: Facilitating the Use of Electronic Financial Documentation

The e-commerce Joint Statement Initiative (JSI) negotiations in the WTO consolidated negotiating text (the “**negotiating document**”)²² has six key sections including: A) enabling electronic commerce; B) openness and e-commerce; C) trust and e-commerce; D) cross-cutting issues; E) telecommunications; and F) market access.²³ Digitization of trading documents would fall within section A.

Section (A)²⁴ discusses “Enabling Electronic Commerce”, It is further divided into part A.1 (Facilitating electronic transactions)²⁵ and part A.2 on digital trade facilitation and logistics. Subsection A.2.1 covers paperless trade where it is specified that efforts should be made to provide trade administration documents in electronic format and accept electronically submitted trade administration documents as legally equivalent to their paper counterparts.²⁶

Furthermore, under the negotiating document, member states will seek to agree to a paperless border environment. If successful, this would promote transition to trading documents that support data-based formats or can be processed electronically.²⁷ Point 3²⁸ explicitly provides that member states shall endeavour to process electronically supporting documentation like bills of lading. Further, governments

²² WTO, “WTO Electronic Commerce Negotiations: Updated Consolidated Negotiating Text – September 2021 Revision,” September 8, 2021, INF/ECOM/62/Rev.2. (Restricted Access).

²³ Yasmin Ismail, “E-Commerce Joint Statement Initiative Negotiations Among World Trade Organization Members,” *International Institute for Sustainable Development*, April 2021, 10.

²⁴ WTO, “WTO Electronic Commerce Negotiations: Updated Consolidated Negotiating Text – September 2021 Revision,” September 8, 2021, INF/ECOM/62/Rev.2. (Restricted Access).

²⁵ References UNCITRAL Model Law on Electronic Commerce 1996.

²⁶ Mira Burri, ‘A WTO Agreement on Electronic Commerce: An Enquiry into its Substance and Viability’, Trade Law 4.0 Working Paper No 1/2021 (forthcoming *Georgetown Journal of International Law* 53 (2022))

²⁷ WTO. “WTO Electronic Commerce Negotiations: Updated Consolidated Negotiating Text – September 2021 Revision.” September 8, 2021. INF/ECOM/62/Rev.2. (Restricted Access). Section A.2, point 1.

²⁸ WTO. “WTO Electronic Commerce Negotiations: Updated Consolidated Negotiating Text – September 2021 Revision.” September 8, 2021. INF/ECOM/62/Rev.2. (Restricted Access). Section A.2, point 3.

would be required to accept that electronic trading documents would function as a legal equivalent of the paper version of those documents. Lastly, the document also urges member states to cooperate in international fora to use electronic forms. They would seek recognition of international standards agreed by international organizations especially e-Phyto, eCITES,²⁹ IATA e-AWB,³⁰ etc. However, within the WTO, there exists divergence of opinions regarding the need to enforce regulations for paperless trading in e-commerce talks.

A best practice for WTO negotiators would be to explicitly reference the MLETR in the negotiating text. This would guarantee compatibility and avoid potential conflicts between future e-commerce rules negotiated by the WTO and member states that have already adopted or are adopting the MLETR.

²⁹ Electronic CITES permit (eCITES), for the implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

³⁰ International Air Transport Association (IATA). Electronic Air Waybill (e-AWB)

V. Case Studies: How Legislation regarding Trade Finance-relevant Documents is Implemented in Practice

A. United Arab Emirates

A country at the forefront of digitization of trading documents today is the United Arab Emirates. In 2021, the Abu Dhabi Global Market (ADGM) implemented the Electronic Transactions Regulations 2021 (“**ADGM ETR 2021**”). This includes the adoption of UNCITRAL model laws, including the MLETR, facilitating international business and promoting paperless trade. The ADGM ETR 2021 comprehensively adopts the MLETR as part of its legal framework governing electronic transferable records. This includes additional supporting provisions on electronic signature, electronic communication, and electronic contracts. Overall, the adoption of the MLETR by ADGM provides businesses with a standardized legal framework for the use of electronic transferable records.

These new regulations set out requirements for electronic signatures, data messages, and other aspects of electronic transferable records. Furthermore, the presence of its own court system allows the courts to apply the ADGM ETR 2021 (Part 5) and other ADGM regulations when resolving disputes.³¹ This helps to bring uniformity in the recognition and enforcement of electronic transferable records and addresses jurisdictional and dispute challenges that are often cited as primary concerns with cross-border trade.

The adoption of the MLETR by ADGM in its legal framework governing electronic transferable records is an important step towards promoting paperless trade and facilitating cross-border transactions. ADGM used the MLETR as a starting point. Importantly, it has gone further by making certain modifications to the content of the model law. A comparative analysis between the MLETR and ADGM ETR 2021 reveals that ADGM ETR 2021 includes more detailed definitions and interpretations, resulting

³¹“ADGM enacts Electronic Transactions Framework,” ADGM, accessed June 30, 2023, <https://www.adgm.com/media/announcements/adgm-enacts-electronic-transactions-framework>.

in a broader coverage and greater clarity compared to the MLETR. This indicates that ADGM has taken a more cautious approach to ensure that the regulations are effective and comprehensible.

ADGM and Dubai International Financial Centre (DIFC) are offshore financial free zones in the UAE with their own civil and commercial laws. They have the authority to use civil tools, such as search and injunctive orders, similar to common law jurisdictions, which can be enforced outside the free zones. The UAE has a legal system consisting of the Civil Code in the Onshore jurisdiction and English Common Law in ADGM and DIFC. The ADGM Courts have established regulations and rules that uphold the application of English common law in ADGM. Their recent adoption of blockchain technology allows for instant verification of commercial judgments, enhancing efficiency and security. This initiative fosters increased trade and commerce, delivering cost savings and certainty for cross-border transactions.³²

When comparing ADGM ETR 2021 and DIFC's electronic transactions law 2017, it becomes apparent that while both laws are limited in jurisdiction within their respective areas, ADGM ETR 2021's provision for cross-border recognition makes it more inclusive and promotes interoperability. Additionally, the ADGM ETR 2021 specifically adopts the MLETR and includes provisions for the use of electronic transferable records and cross-border recognition,³³ whereas the DIFC law focuses on facilitating electronic transactions by eliminating barriers related to writing and signature requirements for its internal purpose within the DIFC jurisdiction³⁴ but lacks provisions for electronic transferable form and cross-border equivalence. Another key difference between the two laws is the requirement for an electronic record to be capable of being produced in tangible form. The DIFC law requires this,³⁵ while the

³² Fast Company. "ADGM Courts Implemented Blockchain Technology. How Is It Transforming the Legal System?" Fast Company Middle East | The future of tech, business and innovation., February 13, 2023. <https://fastcompany.me.com/fastco-work/adgm-courts-implemented-blockchain-technology-how-is-it-transforming-the-legal-system/>.

³³ Section 30, Electronic Transactions Regulations 2021.

³⁴ Article 3, DIFC Electronic Transactions Law No.2 2017.

³⁵ Article 10, DIFC Electronic Transactions Law No.2 2017.

ADGM ETR 2021 does not, so long as the information within the record is accessible for subsequent reference adhering to the language of model law.³⁶ Overall, the successful implementation of the ADGM ETR 2021 could serve as a model for the entire UAE to adopt comparable regulations, which would promote the use of electronic transferable records and enhance efficiency in cross-border trade.

In a significant collaboration, Singapore’s Infocomm Media Development Authority (IMDA) and Monetary Authority (MAS), ADGM’s Financial Services Regulatory Authority (FSRA), along with commercial partners DBS Bank, Emirates NBD, and Standard Chartered, have successfully completed the world’s first cross-border digital trade financing pilot.³⁷ The pilot utilized IMDA’s TradeTrust under the MLETR framework. This enabled the secure transfer of electronic records and a harmonizing legal recognition across jurisdictions. Adopting MLETR as statute law provided increased legal confidence.³⁸ Partner banks gained valuable insights into the benefits of digital trade finance, such as reducing operational costs associated with fraud detection and document verification.³⁹

B. United Kingdom

The UK is a significant trade hub in the world, and an estimated 80% of trade documents are governed by English law.⁴⁰ For many years, trade participants had to

³⁶ Section 2; 17, Electronic Transactions Regulations 2021.

³⁷ UN ESCAP. “World’s First Digital Trade Financing Pilot between MLETR Harmonised Jurisdictions, i.e. between Singapore and Abu Dhabi Global Market.” [digitalizetrade.org](https://www.digitalizetrade.org/projects/worlds-first-digital-trade-financing-pilot-between-mletr-harmonised-jurisdictions-ie), accessed June 30, 2023. <https://www.digitalizetrade.org/projects/worlds-first-digital-trade-financing-pilot-between-mletr-harmonised-jurisdictions-ie>.

³⁸ ADGM FSRA. “World’s First Digital Trade Financing Pilot between MLETR-Harmonised Jurisdictions.” ADGM, Abu Dhabi’s International Financial Centre, April 19, 2023. <https://www.adgm.com/media/announcements/worlds-first-digital-trade-financing-pilot-between-mletr-harmonised-jurisdictions>.

³⁹ Peiyong Chua Heikes and Anil Shergill, “World’s First Digital Trade Financing Pilot,” *Linklaters* (blog), November 25, 2021, <https://www.linklaters.com/en/knowledge/publications/alerts-newsletters-and-guides/2021/november/25/worlds-first-digital-trade-financing-pilot>.

⁴⁰ “Electronic Trade Documents – The Queen’s Speech To The State Opening Of The UK Parliament”, The International Trade and Forfeiting Association, accessed June 30, 2023, <https://itfa.org/electronic-trade-documents-the-queens-speech-to-the-state-opening-of-the-uk-parliament/>.

deal with massive, cumbersome paper trade documents rather than electronic ones. In order to promote trade efficiency, transparency and security, the UK has adopted legislation compatible with the MLETR in its domestic legislation. The Law Commission started to prepare the Electronic Trade Documents Bill (the “Bill”) in 2020 and got Royal Assent on 20 July 2023.⁴¹ The Bill will serve as the basis for other common law countries to adopt the MLETR in their domestic legal systems in the future.

The Law Commission drafted the Bill based on three general principles: 1) adopting the least interventionist approach, 2) technological neutrality and 3) international compatibility. The major legal breakthrough of the Bill is the recognition of *possession of intangibles*. Traditionally, English common law did not recognize the possession of intangibles. The Bill goes beyond this rule by explicitly stipulating that “a person may possess, indorse and part with possession of an electronic trade document”.⁴² Nevertheless, the Bill did not simply accept the definition of possession under MLETR but took a common law approach of definition. As English law governs enormous trade transactions, the Bill could become a game changer in international trade and encourage more trade participants to use electronic transferable records in practice.

⁴¹ “Electronic trade Documents Act 2023, accessed August 18, 2023, <https://bills.parliament.uk/bills/3344/stages>.

⁴² Section 3(1), The Bill.

VI. Recommendations

To conclude, we provide a summary of the best practices to facilitate the broadest possible adoption of digitalization of trade finance-relevant documents in global, regional and local contexts. We focus, in particular, on cutting-edge forward-looking practices and developments. The Recommendations are applicable to international negotiators of treaties, national legislators drafting legislation and implementors of such legislation.

A. Recommendations for future treaty negotiators

1. Legal Instruments Under the UN Framework

The UNCITRAL model laws present a holistic framework that would allow for judicial consistency among jurisdictions. Furthermore, countries who have adopted earlier Model Laws such as the MLEC could engage in a process to expand its borrowing from the most recent model MLETR.

Countries wishing to expand the pool of trade finance available may wish to incorporate some principles from the recently finalized UNDROIT project on Digital Assets. This would allow trade finance to expand into secondary markets and allow for the incorporation of tokens and cryptocurrencies into trade finance.

2. Regional and bilateral/trilateral Legal Instruments

After analysing the key clauses of regional and bilateral/trilateral legal instruments, we propose three recommendations to future negotiators for digitalization of trade finance-relevant documents.

Recommendation on domestic regulatory framework clauses. Domestic regulatory framework clauses can be found commonly in regional and bilateral/trilateral agreements. According to our previous analysis of this clause, we propose a two-tier recommendation for future negotiators. Firstly, regional and

bilateral/trilateral agreements shall explicitly refer to the MLETR following the Singapore pattern. Consequentially, member states will be required to establish and maintain domestic regulatory frameworks consistent with the MLETR. Taking a step back, if negotiating countries cannot accept a clause directly pointing to the MLETR, they should alternatively adopt semi-open treaty language. A domestic regulatory framework clause under the semi-open model can retain the probability for the future introduction of the MLETR, as well as future relevant model laws, into the treaty.

This recommendation aims to bring the MLETR front and center of current member states and be the basis for many additional states to enter into regional and bilateral/trilateral agreements. As more and more states join the global MLETR regulatory network, electronic transferable records will be recognized by different jurisdictions and transferred seamlessly across borders, which will promote trade finance globally.

Recommendation on paperless trading clauses. The second recommendation is to expand the scope of paperless trading clauses in regional agreements. It would be better to use “trade-related documents” instead of “trade administration documents” to cover more trade documents, including electronic transferable records. This recommendation aims to extend the function of traditional paperless trading clauses, thereby corresponding the treaty language with trade realities. In this way, contracting states will not need to consider regulating electronic transferable records in isolation. Digitalization of trade finance-relevant documents will operate under a broader framework of paperless trade like the CPTA.

Recommendation on practical solutions. We encourage states to proactively propose practical solutions to popularize electronic transferable records, and to include relevant clauses in regional and bilateral/trilateral agreements. For example, TradeTrust is one of the practical solutions provided by the Singapore Government to facilitate the transformation, endorsement and verification of electronic transferable records. It falls into the range of “data exchange systems” in digital economy/partnership agreements concluded by Singapore. Practical solutions for electronic transferable records could

ensure that electronic transferable records not only receive legal recognition in various jurisdictions, but can also be utilized effectively across borders. Therefore, the digitalization of trade finance-relevant documents could be further achieved globally.

3. Legal Instruments Under the WTO Framework

WTO members negotiating e-commerce should *start* with the MLETR. This will ensure that the negotiating text will become more digitization friendly. This will lead to high standard and yield commercially meaningful outcomes. This strategic inclusion will guarantee coherence and facilitate the seamless integration of e-commerce rules among nations. Adopting such an advanced starting point will foster a conducive environment for global trade digitalization, ultimately benefiting all stakeholders involved.

Furthermore, the WTO should also incorporate best practices from bilateral agreements into its negotiating document on e-commerce, not only to enhance its effectiveness but also to incentivize nations in the process of adopting or already having adopted relevant legislation to participate in the negotiations. By referring to the MLETR or emulating semi-open clauses from regional/bilateral agreements, the WTO would take a crucial initial step towards establishing uniform rules and standards, ensuring that its negotiations are not lagging existing models that already offer superior provisions for promoting interoperability and facilitating digital trade finance.

B. Recommendations for future domestic legislators

Recommendation for ADGM. The adoption of the MLETR by ADGM in its legal framework governing electronic transferable records is a significant step towards promoting paperless trade and facilitating cross-border transactions. To further enhance the implementation and effectiveness of this framework, it is important for the ADGM to continue collaborating with international partners, financial institutions, and technology providers to address operational costs and limitations associated with blockchain technology. Additionally, active engagement from all stakeholders, including major banks, smaller players, and trade groups, should be encouraged to

participate in pilot projects, fostering broader adoption of digital trade finance and ensuring meaningful change in the ecosystem. The federal government of the UAE could also consider encouraging the adoption of the ADGM model in other regions of the country.

Recommendation for common law jurisdictions. Common law jurisdictions could refer to the UK Bill, which is consistent with the principles of the MLETR. We also encourage other common law jurisdictions to establish their own regulations and case laws on electronic transferable records, in order to complement each other with English law and promote the development of electronic transferable records comprehensively.

ANNEX I

Participation in relevant international instruments

E-commerce JSI Participants	MLEC (1996)	MLES (2001)	UN Convention on the Use of Electronic Communications in International Contracts (2005)	MLETR (2017)
Albania	Australia	Afghanistan	Azerbaijan	Bahrain
Argentina	Bahrain	Antigua and	Bahrain	Belize
Australia	Brunei	Barbuda	Belize	Kiribati
Austria	Darussalam	Barbados	Benin	Papua New
Kingdom of Bahrain	Canada	Bhutan	Cameroon	Guinea
Belgium	China	Botswana	Central	Paraguay
Benin	Colombia	Cabo Verde	African	Singapore
Brazil	Ecuador	China	Republic	United Arab
Brunei Darussalam	El Salvador	Colombia	China	Emirates (Abu
Bulgaria	France	Costa Rica	Colombia	Dhabi Global
Burkina Faso	Guatemala	Gambia	Congo	Market)
Cameroon	Honduras	Ghana	Dominican	
Canada	Hong Kong	Grenada	Republic	
Chile	Ireland	Guatemala	Fiji	
China	Kuwait	Honduras	Honduras	
Colombia	Lao People's	India	Iran (Islamic	
Costa Rica	Democratic	Jamaica	Republic of)	
Côte d'Ivoire	Republic	Madagascar	Kiribati	
Croatia	Malaysia	Maldives	Lebanon	
Cyprus	Malta	Mexico	Madagascar	
Czech Republic	Mauritius	Nicaragua	Mongolia	
Denmark	Mexico	Oman	Montenegro	
Ecuador	New Zealand	Papua New	Panama	
El Salvador	Oman	Guinea	Paraguay	
Estonia	Panama	Paraguay	Philippines	
Finland	Paraguay	Peru	Republic of	
France	Philippines	Qatar	Korea	
Georgia	Qatar	Rwanda	Russian	
Germany	Republic of	Saint Kitts	Federation	
Greece	Korea	and Nevis	Saudi Arabia	
Guatemala	Saudi Arabia	Saint Lucia	Senegal	
Honduras	Singapore	Saint Vincent	Sierra Leone	
Hong Kong, China	Slovenia	and the	Singapore	
Hungary	Thailand	Grenadines	Sri Lanka	
Iceland	United Arab	San Marino	Tuvalu	
Indonesia	Emirates (Abu	Saudi Arabia		
Ireland	Dhabi Global	Thailand		
Israel	Market)	Trinidad and		
Italy	United	Tobago		
Japan	Kingdom of	Uganda		
Kazakhstan	Great Britain	United Arab		
Kenya	United States	Emirates		
Republic of Korea	of America	United		
Kuwait, the State of		Kingdom of		

Kyrgyz Republic Lao People's Democratic Republic Latvia Liechtenstein Lithuania Luxembourg Malaysia Malta Mauritius Mexico Republic of Moldova Mongolia Montenegro Myanmar Netherlands New Zealand Nicaragua Nigeria North Macedonia Norway Oman Panama Paraguay Peru Philippines Poland Portugal Qatar Romania Russian Federation Saudi Arabia Singapore Slovak Republic Slovenia Spain Sweden Switzerland Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu Thailand Türkiye Ukraine United Arab Emirates United Kingdom United States Uruguay		Great Britain and Northern Ireland Ireland Viet Nam Zambia		
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