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UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE LAW

# UNCITRAL Model Law on Electronic Transferable Records



UNITED NATIONS

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**UNCITRAL Model Law on  
Electronic Transferable Records**





## **Decision of the United Nations Commission on International Trade Law (UNCITRAL)**

### **THE UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE LAW,**

*Recalling* General Assembly resolution 2205 (XXI) of 17 December 1966, which established the United Nations Commission on International Trade Law with the purpose of furthering the progressive harmonization and unification of the law of international trade in the interests of all peoples, in particular those of developing countries,

*Mindful* that, while the United Nations Convention on the Use of Electronic Communications in International Contracts (New York, 2005),<sup>1</sup> the UNCITRAL Model Law on Electronic Signatures (2001)<sup>2</sup> and the UNCITRAL Model Law on Electronic Commerce (1996)<sup>3</sup> are of significant assistance to States in enabling and facilitating electronic commerce in international trade, they do not deal or do not sufficiently deal with issues arising from the use of electronic transferable records in international trade,

*Considering* that uncertainties as to the legal value of electronic transferable records constitute an obstacle to international trade,

*Convinced* that legal certainty and commercial predictability in electronic commerce will be enhanced by the harmonization of certain rules on the legal recognition of electronic transferable records on a technologically neutral basis and according to the functional equivalence approach,

*Recalling* that, at its forty-fourth session, in 2011, it mandated Working Group IV (Electronic Commerce) to undertake work on electronic transferable records,<sup>4</sup>

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<sup>1</sup>General Assembly resolution 60/21, annex.

<sup>2</sup>General Assembly resolution 56/80, annex.

<sup>3</sup>General Assembly resolution 51/162, annex.

<sup>4</sup>*Official Records of the General Assembly, Sixty-sixth Session, Supplement No. 17 (A/66/17)*, para. 238.

*Having* considered at its fiftieth session, in 2017, a draft model law on electronic transferable records prepared by the Working Group,<sup>5</sup> together with comments on the draft received from Governments and international organizations invited to sessions of the Working Group,<sup>6</sup>

*Noting* that the draft model law prepared by the Working Group deals with the use of electronic transferable records equivalent to paper-based transferable documents or instruments and does not deal with the use of transferable records existing only in electronic form or transferable records, documents or instruments for which substantive law is medium-neutral,

*Believing* that an UNCITRAL model law on electronic transferable records will constitute a useful addition to existing UNCITRAL texts in the area of electronic commerce by significantly assisting States in enhancing their legislation governing the use of electronic transferable records, or in formulating such legislation where none currently exists,

1. *Adopts* the UNCITRAL Model Law on Electronic Transferable Records, annexed to the report of the fiftieth session of the Commission;

2. *Requests* the Secretariat to finalize an explanatory note that will accompany the UNCITRAL Model Law on Electronic Transferable Records by reflecting deliberations and decisions at the Commission's fiftieth session as regards the draft explanatory notes contained in documents A/CN.9/920 and A/CN.9/922;

3. *Requests* the Secretary-General to publish the UNCITRAL Model Law on Electronic Transferable Records together with an explanatory note, including electronically and in the six official languages of the United Nations, and to disseminate it broadly to Governments and other interested bodies;

4. *Recommends* that all States give favourable consideration to the UNCITRAL Model Law on Electronic Transferable Records when revising or adopting legislation relevant to electronic transferable records, and invites States that have used the Model Law to advise the Commission accordingly.

*1057th meeting  
13 July 2017*

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<sup>5</sup>A/CN.9/920.

<sup>6</sup>A/CN.9/921 and addenda.

# UNCITRAL Model Law on Electronic Transferable Records

## CHAPTER I. GENERAL PROVISIONS

### *Article 1. Scope of application*

1. This Law applies to electronic transferable records.
2. Other than as provided for in this Law, nothing in this Law affects the application to an electronic transferable record of any rule of law governing a transferable document or instrument including any rule of law applicable to consumer protection.
3. This Law does not apply to securities, such as shares and bonds, and other investment instruments, and to [...].<sup>1</sup>

### *Article 2. Definitions*

For the purposes of this Law:

“*Electronic record*” means information generated, communicated, received or stored by electronic means, including, where appropriate, all information logically associated with or otherwise linked together so as to become part of the record, whether generated contemporaneously or not;

“*Electronic transferable record*” is an electronic record that complies with the requirements of article 10;

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<sup>1</sup>The enacting jurisdiction may consider including a reference to: (a) documents and instruments that may be considered transferable, but that should not fall under the scope of the Model Law; (b) documents and instruments falling under the scope of the Convention Providing a Uniform Law for Bills of Exchange and Promissory Notes (Geneva, 1930) and the Convention Providing a Uniform Law for Cheques (Geneva, 1931); and (c) electronic transferable records existing only in electronic form.

“*Transferable document or instrument*” means a document or instrument issued on paper that entitles the holder to claim the performance of the obligation indicated in the document or instrument and to transfer the right to performance of the obligation indicated in the document or instrument through the transfer of that document or instrument.

### *Article 3. Interpretation*

1. This Law is derived from a model law of international origin. In the interpretation of this Law, regard is to be had to the international origin and to the need to promote uniformity in its application.
2. Questions concerning matters governed by this Law which are not expressly settled in it are to be settled in conformity with the general principles on which this Law is based.

### *Article 4. Party autonomy and privity of contract*

1. The parties may derogate from or vary by agreement the following provisions of this Law: [...].<sup>2</sup>
2. Such an agreement does not affect the rights of any person that is not a party to that agreement.

### *Article 5. Information requirements*

Nothing in this Law affects the application of any rule of law that may require a person to disclose its identity, place of business or other information, or relieves a person from the legal consequences of making inaccurate, incomplete or false statements in that regard.

### *Article 6. Additional information in electronic transferable records*

Nothing in this Law precludes the inclusion of information in an electronic transferable record in addition to that contained in a transferable document or instrument.

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<sup>2</sup>The enacting jurisdiction may consider which provisions of the Model Law, if any, the parties may derogate from or vary by agreement.

*Article 7. Legal recognition of an electronic transferable record*

1. An electronic transferable record shall not be denied legal effect, validity or enforceability on the sole ground that it is in electronic form.
2. Nothing in this Law requires a person to use an electronic transferable record without that person's consent.
3. The consent of a person to use an electronic transferable record may be inferred from the person's conduct.

**CHAPTER II. PROVISIONS ON  
FUNCTIONAL EQUIVALENCE***Article 8. Writing*

Where the law requires that information should be in writing, that requirement is met with respect to an electronic transferable record if the information contained therein is accessible so as to be usable for subsequent reference.

*Article 9. Signature*

Where the law requires or permits a signature of a person, that requirement is met by an electronic transferable record if a reliable method is used to identify that person and to indicate that person's intention in respect of the information contained in the electronic transferable record.

*Article 10. Transferable documents or instruments*

1. Where the law requires a transferable document or instrument, that requirement is met by an electronic record if:
  - (a) The electronic record contains the information that would be required to be contained in a transferable document or instrument; and
  - (b) A reliable method is used:
    - (i) To identify that electronic record as the electronic transferable record;
    - (ii) To render that electronic record capable of being subject to control from its creation until it ceases to have any effect or validity; and
    - (iii) To retain the integrity of that electronic record.

2. The criterion for assessing integrity shall be whether information contained in the electronic transferable record, including any authorized change that arises from its creation until it ceases to have any effect or validity, has remained complete and unaltered apart from any change which arises in the normal course of communication, storage and display.

#### *Article 11. Control*

1. Where the law requires or permits the possession of a transferable document or instrument, that requirement is met with respect to an electronic transferable record if a reliable method is used:

(a) To establish exclusive control of that electronic transferable record by a person; and

(b) To identify that person as the person in control.

2. Where the law requires or permits transfer of possession of a transferable document or instrument, that requirement is met with respect to an electronic transferable record through the transfer of control over the electronic transferable record.

### **CHAPTER III. USE OF ELECTRONIC TRANSFERABLE RECORDS**

#### *Article 12. General reliability standard*

For the purposes of articles 9, 10, 11, 13, 16, 17 and 18, 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 the light of all relevant circumstances, which may include:

- (i) Any operational rules relevant to the assessment of reliability;
- (ii) The assurance of data integrity;
- (iii) The ability to prevent unauthorized access to and use of the system;
- (iv) The security of hardware and software;
- (v) The regularity and extent of audit by an independent body;
- (vi) The existence of a declaration by a supervisory body, an accreditation body or a voluntary scheme regarding the reliability of the method;
- (vii) Any applicable industry standard; or

(b) Proven in fact to have fulfilled the function by itself or together with further evidence.

*Article 13. Indication of time and place  
in electronic transferable records*

Where the law requires or permits the indication of time or place with respect to a transferable document or instrument, that requirement is met if a reliable method is used to indicate that time or place with respect to an electronic transferable record.

*Article 14. Place of business*

1. A location is not a place of business merely because that is:
  - (a) Where equipment and technology supporting an information system used by a party in connection with electronic transferable records are located; or
  - (b) Where the information system may be accessed by other parties.
2. The sole fact that a party makes use of an electronic address or other element of an information system connected to a specific country does not create a presumption that its place of business is located in that country.

*Article 15. Endorsement*

Where the law requires or permits the endorsement in any form of a transferable document or instrument, that requirement is met with respect to an electronic transferable record if the information required for the endorsement is included in the electronic transferable record and that information is compliant with the requirements set forth in articles 8 and 9.

*Article 16. Amendment*

Where the law requires or permits the amendment of a transferable document or instrument, that requirement is met with respect to an electronic transferable record if a reliable method is used for amendment of information in the electronic transferable record so that the amended information is identified as such.

*Article 17. Replacement of a transferable document or instrument  
with an electronic transferable record*

1. An electronic transferable record may replace a transferable document or instrument if a reliable method for the change of medium is used.

2. For the change of medium to take effect, a statement indicating a change of medium shall be inserted in the electronic transferable record.
3. Upon issuance of the electronic transferable record in accordance with paragraphs 1 and 2, the transferable document or instrument shall be made inoperative and ceases to have any effect or validity.
4. A change of medium in accordance with paragraphs 1 and 2 shall not affect the rights and obligations of the parties.

*Article 18. Replacement of an electronic transferable record with a transferable document or instrument*

1. A transferable document or instrument may replace an electronic transferable record if a reliable method for the change of medium is used.
2. For the change of medium to take effect, a statement indicating a change of medium shall be inserted in the transferable document or instrument.
3. Upon issuance of the transferable document or instrument in accordance with paragraphs 1 and 2, the electronic transferable record shall be made inoperative and ceases to have any effect or validity.
4. A change of medium in accordance with paragraphs 1 and 2 shall not affect the rights and obligations of the parties.

**CHAPTER IV. CROSS-BORDER RECOGNITION OF  
ELECTRONIC TRANSFERABLE RECORDS**

*Article 19. Non-discrimination of foreign  
electronic transferable records*

1. An electronic transferable record shall not be denied legal effect, validity or enforceability on the sole ground that it was issued or used abroad.
2. Nothing in this Law affects the application to electronic transferable records of rules of private international law governing a transferable document or instrument.



# **Explanatory Note to the UNCITRAL Model Law on Electronic Transferable Records**

## **I. INTRODUCTION**

### **A. PURPOSE OF THIS EXPLANATORY NOTE**

1. In preparing and adopting the UNCITRAL Model Law on Electronic Transferable Records (hereinafter referred to as “the Model Law”), the United Nations Commission on International Trade Law (UNCITRAL) was mindful that the Model Law would be a more effective tool for States modernizing their legislation if background and explanatory information were provided. This Explanatory Note, drawn from the travaux préparatoires of the Model Law, is intended to be helpful to legislators, to providers and users of services related to electronic transferable records, as well as to academics.

2. In the preparation of the Model Law, it was assumed that it would be accompanied by explanatory materials. For example, it was decided in respect of certain issues not to settle them in the Model Law but to address them in the explanatory materials so as to provide guidance to States enacting the Model Law. Such information might also assist States in considering which, if any, of the provisions of the Model Law might have to be varied to take into account particular national circumstances.

### **B. OBJECTIVES**

3. The increased use of electronic means improves the efficiency of commercial activities, including by allowing reuse and analysis of data, enhances trade connections and allows new access opportunities for previously remote parties and markets, thus playing a fundamental role in promoting trade and economic development both domestically and internationally. However, certainty is needed as to the legal value of the use of those electronic means. In order to address that need, UNCITRAL has prepared a number of texts aimed at removing obstacles to the use of electronic means in commercial activities such as the UNCITRAL Model Law on Electronic Commerce,<sup>1</sup>

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<sup>1</sup>UNCITRAL Model Law on Electronic Commerce with Guide to Enactment (New York, 1999), United Nations Publication, Sales No. E.99.V.4.

the UNCITRAL Model Law on Electronic Signatures<sup>2</sup> and the United Nations Convention on the Use of Electronic Communications in International Contracts (the “Electronic Communications Convention”).<sup>3</sup> Those texts have been adopted in a large number of jurisdictions so that a uniform law of electronic commerce has effectively been established.

4. Transferable documents and instruments are essential commercial tools. Their availability in electronic form may be greatly beneficial for facilitating electronic commerce in international trade as this could allow for their faster and more secure transmission, among other benefits. Electronic equivalents of transferable documents and instruments may be particularly relevant for certain business areas such as transport and logistics, and finance. The introduction of electronic transferable records may also offer an opportunity to review existing commercial practices and introduce new ones. Moreover, a fully paperless trade environment may not be established without their use. At the same time, the dematerialization of transferable documents and instruments may pose peculiar challenges given the established practice of employing various paper-based precautions in order to reduce risks associated with the unauthorized duplication of those documents and instruments.

5. UNCITRAL dealt with the subject of transferable documents and instruments in electronic forms before the adoption of the Model Law. Article 14, paragraph 3, of the United Nations Convention on the Carriage of Goods by Sea (the “Hamburg Rules”)<sup>4</sup> may be interpreted as implying the possible use of electronic bills of lading. Articles 16 and 17 of the UNCITRAL Model Law on Electronic Commerce provide rules on actions related to contracts of carriage of goods and to transport documents that enable the dematerialization, among others, of documents incorporating a claim to delivery of goods.<sup>5</sup> The United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea (the “Rotterdam Rules”)<sup>6</sup> devotes a chapter to electronic transport records. In particular, article 8 of the Rotterdam Rules provides for the use and effect of electronic transport records, article 9 indicates the procedures for the use of negotiable electronic transport records and article 10 sets out rules for the replacement of negotiable transport documents with negotiable electronic transport records and vice versa. Moreover, the Rotterdam Rules define both the notion of electronic transport record

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<sup>2</sup>UNCITRAL Model Law on Electronic Signatures with Guide to Enactment (New York, 2002), United Nations Publication, Sales No. E.02.V.8.

<sup>3</sup>General Assembly resolution 60/21, annex.

<sup>4</sup>United Nations, *Treaty Series*, vol. 1695, No. 29215, p. 3

<sup>5</sup>Those provisions have been enacted in national laws. However, details on their application in business practice are not available.

<sup>6</sup>General Assembly resolution 63/122, annex.

(article 1, paragraph 18)<sup>7</sup> and that of negotiable electronic transport record (article 1, paragraph 19).<sup>8</sup>

6. Unlike those instruments, the Electronic Communications Convention excludes from its scope of application “bills of exchange, promissory notes, consignment notes, bills of lading, warehouse receipts or any transferable document or instrument that entitles the bearer or beneficiary to claim the delivery of goods or the payment of a sum of money” (article 2, paragraph 2). That exclusion was based on the view that finding a solution to the challenges posed by the potential consequences of unauthorized duplication of those documents and instruments required a combination of legal, technological and business solutions, which had not yet been fully developed and tested.<sup>9</sup>

7. In 2011, when the Commission decided to undertake work in the field of electronic transferable records, support was expressed for that work in light of benefits that the formulation of uniform legal standards in that field could bring to the promotion of electronic communications in international trade generally as well as to the implementation of the Rotterdam Rules and to other areas of transport business specifically.<sup>10</sup> UNCITRAL decided to prepare a model law to enable the use of electronic transferable records on the basis of their functional equivalence with transferable documents or instruments, building upon the fundamental principles underlying existing UNCITRAL texts in the area of electronic commerce, namely non-discrimination against the use of electronic communications, functional equivalence and technological neutrality.

8. Facilitating the cross-border use of electronic transferable records is of significant practical importance. In that respect, it should be noted that national legislation predating the adoption of the Model Law and dealing with specific types of electronic transferable records did not address cross-border aspects. Moreover, to the extent that that legislation adopted specific models and technologies, the use of those models and technologies could create additional obstacles to the cross-border use of electronic transferable records. The Model Law aims at facilitating the cross-border use of transferable documents and instruments by providing not only a uniform and neutral text for adoption

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<sup>7</sup>Rotterdam Rules, article 1, paragraph 18: “Electronic transport record” means information in one or more messages issued by electronic communication under a contract of carriage by a carrier, including information logically associated with the electronic transport record by attachments or otherwise linked to the electronic transport record contemporaneously with or subsequent to its issue by the carrier, so as to become part of the electronic transport record, that: (a) Evidences the carrier’s or a performing party’s receipt of goods under a contract of carriage; and (b) Evidences or contains a contract of carriage.

<sup>8</sup>Ibid., article 1, paragraph 19: “Negotiable electronic transport record” means an electronic transport record: (a) That indicates, by wording such as “to order”, or “negotiable”, or other appropriate wording recognized as having the same effect by the law applicable to the record, that the goods have been consigned to the order of the shipper or to the order of the consignee, and is not explicitly stated as being “non-negotiable” or “not negotiable”; and (b) The use of which meets the requirements of article 9, paragraph 1.

<sup>9</sup>Official Records of the General Assembly, Sixtieth Session, Supplement No. 17 (A/60/17), para. 27.

<sup>10</sup>Ibid., Sixty-sixth Session, Supplement No. 17 (A/66/17), para. 235.

by all jurisdictions, but also a dedicated provision addressing cross-border aspects of electronic transferable records.

9. UNCITRAL intends to continue monitoring the technical, legal and commercial developments that underline the Model Law. It may decide, if advisable, to add new provisions to the Model Law or modify the existing ones.

### C. SCOPE

10. The Model Law applies to electronic transferable records that are the functional equivalent of transferable documents or instruments. Transferable documents or instruments are paper-based documents or instruments that entitle the holder to claim the performance of the obligation indicated therein and that allow the transfer of the claim to that performance by transferring the document or instrument. The law of each jurisdiction will determine which documents or instruments are transferable. The Model Law does not apply to electronic transferable records existing only in electronic form, as those records do not need a functional equivalent to operate in the electronic environment. The Model Law does not affect the medium-neutral substantive law applicable to electronic transferable records.

11. The Model Law does not aim to affect in any manner existing law applicable to transferable documents or instruments, which is referred to as “substantive law” and includes rules on private international law.

### D. STRUCTURE

12. The Model Law consists of four chapters. The first chapter contains general provisions relating to the scope of application of the Model Law and to certain general principles. The second chapter contains provisions on functional equivalence. The third chapter contains provisions on the use of electronic transferable records. The fourth chapter deals with the cross-border recognition of electronic transferable records.

### E. BACKGROUND AND DRAFTING HISTORY

13. The possibility of future work by UNCITRAL with regard to issues of negotiability and transferability of rights in goods in an electronic environment was first mentioned at the Commission’s twenty-seventh session, in 1994,<sup>11</sup> and subsequently discussed in various sessions of the Commission and its working groups, in particular in the context of electronic commerce and

<sup>11</sup>Ibid., *Forty-ninth Session, Supplement No. 17 (A/49/17)*, para. 201.

transport law.<sup>12</sup> In that framework, two documents have dealt in depth with substantive aspects of the topic:

(a) Document A/CN.9/WG.IV/WP.69 discussed both paper-based and electronic bills of lading and other maritime transport documents. In particular, that document provided an overview of the attempts to deal with bills of lading in the electronic environment, and made suggestions for model legislative provisions which were eventually adopted as articles 16 and 17 of the UNCITRAL Model Law on Electronic Commerce. Furthermore, that document contained a preliminary analysis of the conditions for establishing the functional equivalence of electronic and paper-based bills of lading. In this respect, it highlighted as a key issue the possibility of identifying with certainty the holder of the bill that would be entitled to delivery of the goods. That issue brought into focus the need to ensure the uniqueness of the electronic record incorporating the title to the goods;<sup>13</sup> and

(b) Document A/CN.9/WG.IV/WP.90 discussed in general legal issues relating to transfer of rights in tangible goods and other rights. It offered a comparative description of the methods used for the transfer of property interests in tangible property and for the perfection of security interests, and of the challenges posed by the transposition of those methods to the electronic environment. It also provided an update on efforts aimed at enabling the use of electronic means in the transfer of rights in tangible goods. With respect to documents of title and negotiable instruments, that document stressed the desirability of ensuring control over the electronic transferable record in a manner equivalent to physical possession, and suggested that a combination of a registry system and adequately secure technology could assist in addressing issues relating to the singularity and authenticity of the electronic record.<sup>14</sup>

14. At its forty-first (2008) and forty-second (2009) sessions, the Commission received proposals from States for work on electronic transferable records.<sup>15</sup> After preparatory work,<sup>16</sup> the Commission mandated Working Group IV to undertake work in the field of electronic transferable records.<sup>17</sup>

<sup>12</sup>Ibid., *Fifty-sixth Session, Supplement No. 17 (A/56/17)*, paras. 291-293. See also A/CN.9/484, paras. 87-93. For an historical record of previous sessions, see A/CN.9/WG.IV/WP.90, paras. 1-4.

<sup>13</sup>A/CN.9/WG.IV/WP.69, para. 92.

<sup>14</sup>A/CN.9/WG.IV/WP.90, paras. 35-37.

<sup>15</sup>*Official Records of the General Assembly, Sixty-third Session, Supplement No. 17* and corrigendum (A/63/17 and Corr.1), para. 335; and *ibid.*, *Sixty-fourth Session, Supplement No. 17 (A/64/17)*, para. 338.

<sup>16</sup>*Ibid.*, *Sixty-fifth Session, Supplement No. 17 (A/65/17)*, paras. 245-247 and 250; and *ibid.*, *Sixty-sixth Session, Supplement No. 17 (A/66/17)*, paras. 232-235.

<sup>17</sup>*Ibid.*, *Sixty-sixth Session, Supplement No. 17 (A/66/17)*, para. 238.

15. The Working Group worked in that field from its forty-fifth session (Vienna, 10-14 October 2011) to its fifty-fourth session (Vienna, 31 October-4 November 2016).<sup>18</sup> At its forty-seventh session (New York, 13-17 May 2013), the Working Group reached the general understanding that its work should be guided by the principles of functional equivalence and technological neutrality, and should not deal with matters governed by substantive law.<sup>19</sup> At its fiftieth session (Vienna, 10-14 November 2014), the Working Group agreed to proceed with the preparation of a draft model law on electronic transferable records<sup>20</sup> with priority given to the preparation of provisions dealing with electronic equivalents of paper-based transferable documents or instruments.<sup>21</sup> At its fifty-fourth session (Vienna, 31 October-4 November 2016), the Working Group completed its work on the preparation of a draft model law on electronic transferable records with accompanying explanatory materials. It authorized the transmission of the text (a) for comments by Governments and international organizations invited to sessions of the Working Group and (b) to the Commission for consideration at its fiftieth session, in 2017, together with any comments from Governments and international organizations.<sup>22</sup>

16. At its forty-fifth (2012) to forty-ninth (2016) sessions, the Commission considered the progress report of the Working Group, reaffirming its mandate and endorsing its decision to prepare a model law with explanatory materials.<sup>23</sup> At its forty-ninth session (2016), the Commission noted that the draft model law being prepared by the Working Group focused on domestic aspects of the use of electronic transferable records equivalent to paper-based transferable documents or instruments, and that international aspects of the use of those records, as well as the use of transferable records existing only in electronic form, would be addressed at a later stage.<sup>24</sup>

17. At its fiftieth session, in 2017, the Commission had before it: (a) the report of Working Group IV (Electronic Commerce) on the work of its fifty-fourth session (Vienna, 31 October-4 November 2016);<sup>25</sup> (b) a draft model law on electronic transferable records with explanatory notes;<sup>26</sup> (c) a compilation of comments by Governments and international organizations on the draft model

<sup>18</sup>For the reports of the Working Group on the work of those sessions, see A/CN.9/737, A/CN.9/761, A/CN.9/768, A/CN.9/797, A/CN.9/804, A/CN.9/828, A/CN.9/834, A/CN.9/863, A/CN.9/869 and A/CN.9/897.

<sup>19</sup>A/CN.9/768, para. 14.

<sup>20</sup>A/CN.9/828, para. 23.

<sup>21</sup>A/CN.9/828, para. 30.

<sup>22</sup>A/CN.9/897, para. 20.

<sup>23</sup>*Official Records of the General Assembly, Sixty-seventh Session, Supplement No. 17 (A/67/17)*, para. 90; *ibid.*, *Sixty-eighth Session, Supplement No. 17 (A/68/17)*, para. 230; *ibid.*, *Sixty-ninth Session, Supplement No. 17 (A/69/17)*, para. 149; *ibid.*, *Seventieth Session, Supplement No. 17 (A/70/17)*, para. 231; and *ibid.*, *Seventy-first Session, Supplement No. 17 (A/71/17)*, para. 226.

<sup>24</sup>*Ibid.*, *Seventy-first Session, Supplement No. 17 (A/71/17)*, para. 226.

<sup>25</sup>A/CN.9/897.

<sup>26</sup>A/CN.9/920.

law and explanatory notes;<sup>27</sup> and (d) a note by the Secretariat on proposed amendments to the draft explanatory notes and additional issues for consideration by the Commission.<sup>28</sup> After deliberations, the Commission adopted the Model Law<sup>29</sup> and approved its Explanatory Note.<sup>30</sup>

## II. Article-by-article commentary

### CHAPTER I. GENERAL PROVISIONS

#### *Article 1. Scope of application*

##### *Paragraph 1*

18. The Model Law provides generic rules that may apply to various types of electronic transferable records based on the principle of technological neutrality and a functional equivalence approach. The principle of technological neutrality entails adopting a system-neutral approach, enabling the use of various models whether based on registry, token, distributed ledger or other technology.

19. Article 2, paragraph 2, of the Electronic Communications Convention provided a starting point for defining the scope of application of the Model Law. That provision excludes from the scope of application of the Electronic Communications Convention “bills of exchange, promissory notes, consignment notes, bills of lading, warehouse receipts or any transferable document or instrument that entitles the bearer or beneficiary to claim the delivery of goods or the payment of a sum of money”. That exclusion is due to the fact that at the time of the adoption of the Convention “finding a solution for this problem [of the legal treatment of electronic transferable records] required a combination of legal, technological and business solutions, which had not yet been fully developed and tested”.<sup>31</sup>

20. The Model Law focuses on the transferability of the record and not on its negotiability on the understanding that negotiability relates to the underlying rights of the holder of the instrument, which fall under substantive law.

<sup>27</sup>A/CN.9/921 and Add.1-3.

<sup>28</sup>A/CN.9/922.

<sup>29</sup>*Official Records of the General Assembly, Seventy-second Session, Supplement No. 17 (A/72/17)*, annex I.

<sup>30</sup>*Ibid.*, chapter III, section A.

<sup>31</sup>United Nations Convention on the Use of Electronic Communications in International Contracts (New York, 2005), Explanatory Note, United Nations Publication Sales No. E.07.V.2, para. 81.

21. Certain documents or instruments, which are generally transferable, but whose transferability is limited due to other agreements, do not fall under the definition of “transferable document or instrument” contained in the Model Law (see below, paras. 36-37). The Model Law would therefore not apply to those documents or instruments. However, that conclusion should not be interpreted as preventing the issuance of those documents or instruments in an electronic transferable records management system since such prohibition is likely to result in unnecessary multiplication of systems and increased costs.

#### *Paragraph 2*

22. Paragraph 2 sets forth the general principle that the Model Law does not affect substantive law, including rules of private international law, applicable to transferable documents or instruments. Hence, the same substantive law applies to a transferable document or instrument and to the electronic transferable record containing the same information as that transferable document or instrument. That general principle applies to each step of the life cycle of an electronic transferable record.

23. One consequence of the rule contained in paragraph 2 is that the Model Law is not intended to be used to create electronic transferable records that do not have an equivalent transferable document or instrument. Allowing such creation by party autonomy would circumvent the principle of *numerus clausus* of transferable documents or instruments, where that principle is applicable (see para. 51 below).

24. During the preparation of the Model Law, UNCITRAL agreed that certain issues related to electronic transferable records did not require a dedicated provision, since those issues were matters of substantive law. Such matters include the requirements and legal effects of:

- (a) The definition of “performance of an obligation”;
- (b) The issuance of an electronic transferable record to bearer;
- (c) The change of the modalities for circulation from an electronic transferable record issued to bearer to an electronic transferable record issued to the order of a named person, and conversely (“blank endorsement”);
- (d) The reissuance of an electronic transferable record (see also below, paras. 168 and 172);
- (e) Division and consolidation of electronic transferable records; and
- (f) The use of an electronic transferable record, including as collateral for security rights purposes (see below, paras. 26 and 108).



25. The explicit reference to consumer protection law aims at highlighting the interaction between that law and the Model Law and represents an application of the general principle that the Model Law does not affect the substantive law applicable to transferable documents or instruments.

### *Paragraph 3*

26. Paragraph 3 clarifies that the Model Law does not apply to investment securities. The general determination as to which instruments are to be counted as securities is a matter of substantive law. The term “investment instruments” is understood to include derivative instruments, money market instruments and any other financial product available for investment. The term “securities” does not refer to the use of electronic transferable records as collateral and therefore the Model Law does not prevent the use of electronic transferable records for security rights purposes.

27. The purpose of paragraph 3 is to permit the exclusion of certain documents or instruments from the scope of the Model Law. To that end, paragraph 3 includes an open-ended exclusion list that permits application of the Model Law according to the needs of each enacting jurisdiction, thus providing both flexibility and clarity on the scope of application of the Model Law.

28. The footnote to paragraph 3 highlights three possible types of exclusions and does not prevent enacting jurisdictions from adding other types of exclusions according to their needs:

(a) Certain instruments or documents, such as letters of credit, which may be considered transferable documents or instruments in some jurisdictions but not in others. In that respect, it should be noted that national legislation does not define transferable documents and instruments in a uniform manner;

(b) Documents or instruments falling under the scope of 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) (the “Geneva Conventions”) in order to avoid possible conflicts between the Geneva Conventions and the Model Law, regardless of whether the Geneva Conventions are in force or not in the jurisdiction enacting the Model Law (see below, paras. 30-33);

(c) Electronic transferable records that exist only in an electronic environment. Such exclusion could be useful in jurisdictions allowing for the use of both electronic transferable records that are the functional equivalent of transferable documents or instruments and of electronic transferable records that exist only in an electronic environment. In that respect, it should be noted that a provision allowing for the application on a residual basis of the Model Law to electronic transferable records that exist only in an electronic environment,

so that in case of conflict the Model Law would not prevail over the law applicable to such records, was not inserted in the Model Law. That decision was taken due to concerns with respect to the relationship between the general principles underlying the Model Law and the general principles governing laws of a different nature.

29. The list of possible exclusions provided in the footnote to paragraph 3 is purely illustrative. Other subject matter that could be excluded from the scope of application of the Model Law include transport documents and electronic transport records falling under the scope of application of the Rotterdam Rules.

#### *The Geneva Conventions*

30. During the preparation of the Model Law, different views have been expressed on the interaction between the Model Law and the Geneva Conventions.

31. One view expressed was that formalism was a fundamental principle underpinning the Geneva Conventions that prevented the use of electronic means and therefore the instruments falling under the scope of those Conventions should always be excluded from the scope of the Model Law. In order to accommodate that view, the Model Law permits the exclusion of the documents and instruments falling under the scope of the Geneva Conventions (see above, subpara. 28(b)).

32. Jurisdictions adhering to that view and wishing to enable the use of electronic versions of the documents and instruments falling under the scope of the Geneva Conventions may consider introducing electronic transferable records existing only in an electronic environment. Those electronic transferable records existing only in an electronic environment will neither be legally the documents and instruments falling under the scope of the Geneva Conventions nor will they fall under the scope of the Model Law.

33. Another view expressed was that the scope of application of the Model Law should include instruments falling under the scope of the Geneva Conventions on the understanding that the Model Law generally aims at overcoming obstacles to the use of electronic means arising from form requirements relating to the use of paper-based transferable documents or instruments.

#### *References*

A/CN.9/761, paragraphs 18-25, 28-30; A/CN.9/768, paragraphs 17-24; A/CN.9/797, paragraphs 16-20, 27-28, 65, 109-112; A/CN.9/828, paragraphs 24-30, 81-84; A/CN.9/834, paragraphs 72-73; A/CN.9/863, paragraphs 17-22; A/CN.9/869, paragraphs 19-23.

## Article 2. Definitions

34. The definition of “electronic record” builds upon the definition of “data message” contained in the UNCITRAL Model Law on Electronic Commerce (1996) and in the Electronic Communications Convention and aims to clarify that electronic records may, but do not need to, include a set of composite information. It highlights the fact that information may be associated with the electronic transferable record at the time of issuance or at any time before or after (e.g., information related to endorsement). In particular, the generation of metadata does not necessarily take place after the generation of a record, but could also precede it. The composite nature of an electronic transferable record is particularly relevant for the notion of “integrity” contained in article 10, paragraph 2, of the Model Law.

35. Moreover, the definition of “electronic record” allows for the possibility that in certain electronic transferable records management systems data elements may, taken together, provide the information constituting the electronic transferable record, but with no discrete record constituting in itself the electronic transferable record. The word “logically” refers to computer software and not to human logic.

36. The Model Law contains a definition of “electronic transferable record”. For comments on the definition of “electronic transferable record” see below, paras. 86-88.

37. The definition of “transferable document or instrument” focuses on the key functions of transferability and of providing a title to performance. It does not aim to affect the principle that substantive law should determine the rights of the possessor.

38. Applicable substantive law should determine which documents or instruments are transferable in the various jurisdictions. An indicative list of transferable documents or instruments, inspired by article 2, paragraph 2, of the Electronic Communications Convention, includes: bills of exchange; cheques; promissory notes; consignment notes; bills of lading; warehouse receipts; insurance certificates;<sup>32</sup> and air waybills.

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<sup>32</sup>The reference to insurance certificates should not be understood as referring to various types of certificates and other documents required and issued under certain treaties concluded by the International Maritime Organization (IMO). Those documents are not “transferable documents or instruments” in the meaning of article 2 of the Model Law and therefore the Model Law would not be applicable. In particular, “insurance certificates” issued to fulfil obligations contained in certain IMO treaties do not fall under the definition of “transferable documents or instruments”. For instance, the 1992 International Convention on Civil Liability for Oil Pollution Damage, the 2007 Nairobi International Convention on the Removal of Wrecks and other so-called “civil liability conventions” contain the requirement that the ship owner should maintain insurance in place covering the civil liability and impose an obligation on the government of the ships’ flag to issue a certificate confirming that the insurance is in place. That certificate is issued on the basis of an insurance policy, which very often in the shipping industry is called a “Blue Card”. The

39. As indicated in the definition of “transferable document or instrument”, the words “transferable document or instrument” refer to a transferable document or instrument issued on paper (as opposed to an electronic transferable record) in the Arabic, Chinese, English and Russian language versions of the Model Law. The words “paper-based” are used for linguistic clarity before the words “transferable document or instrument” in the French and Spanish language versions of the Model Law.

#### *References*

A/CN.9/768, paragraphs 25-34; A/CN.9/797, paragraphs 21-28, 43-45; A/CN.9/828, paragraph 31; A/CN.9/834, paragraphs 25-26, 95-98 and 100; A/CN.9/863, paragraphs 88-102; A/CN.9/869, paragraphs 24-27.

### *Article 3. Interpretation*

#### *International origin and promotion of uniform interpretation*

40. Article 3 is intended to draw the attention of courts and other authorities to the fact that domestic enactments of the Model Law should be interpreted with reference to their international origin and the need to promote their uniform interpretation in light of that origin. The uniform interpretation of UNCITRAL texts is a key element in ensuring predictability of the law applicable to commercial transactions across borders.

41. Similar wording appears in several UNCITRAL texts, including in article 3 of the UNCITRAL Model Law on Electronic Commerce and article 4 of the UNCITRAL Model Law on Electronic Signatures, and was first introduced in article 7 of the Convention on the Limitation Period in the International Sale of Goods (New York, 1974).<sup>33</sup> The words “This Law is derived from a model law of international origin” emphasize that the law constitutes an enactment of a model law with international origin. Those words are not contained in pre-existing UNCITRAL texts.

42. Article 3, unlike other provisions contained in UNCITRAL texts and dealing with their international origin and uniform interpretation, does not refer to the notion of good faith. That exclusion is due to the fact that the principle of good faith has a specific meaning with respect to transferable documents or instruments, which is distinct from the general principle of good faith in international trade law. The principle of good faith as a general principle

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underlying insurance may be considered to be “transferable”, but the certificate is an administrative document confirming that the relevant government body has verified that the insurance policy is in place.

<sup>33</sup>United Nations, *Treaty Series*, vol. 1511, No. 26119, p. 3.

of international law could be included in the general principles on which the Model Law is based.

#### *General principles*

43. The notion of “general principles” has been used in several UNCITRAL texts. Article 7 of the United Nations Convention on Contracts for the International Sale of Goods (Vienna, 1980)<sup>34</sup> is the provision containing that notion that has been most interpreted by case law.<sup>35</sup>

44. The general principles of the law governing electronic communications, namely the principles of non-discrimination against electronic communications, technological neutrality and functional equivalence, which have already been identified and formulated in other UNCITRAL texts, are the fundamental principles underlying the Model Law.

45. The exact content and operation of the notion of general principles referred to in paragraph 2 may be clarified progressively in light of the increasing use, application and interpretation of the Model Law (for the principle of good faith, see above, para. 42). Such progressive clarification provides flexibility in the interpretation of the Model Law, which may be useful in ensuring the ability of the Model Law to accommodate evolving commercial practices and business needs.

#### *References*

A/CN.9/768, paragraph 35; A/CN.9/797, paragraph 29; A/CN.9/869, paragraphs 28-31.

#### *Article 4. Party autonomy and privity of contract*

46. Party autonomy is a fundamental principle underpinning commercial law and UNCITRAL texts that aims to promote international trade as well as technological innovation and the development of new business practices. Moreover, party autonomy may provide desired flexibility in the implementation of the Model Law.

47. However, UNCITRAL texts on electronic commerce contain some limits to party autonomy in order to avoid conflicts with rules of mandatory application, such as those on public policy.

<sup>34</sup>United Nations, *Treaty Series*, vol. 1489, No. 25567, p. 3.

<sup>35</sup>See UNCITRAL Digest of Case Law on the United Nations Convention on Contracts for the International Sale of Goods (2016 and subsequent updates), *sub* article 7.

48. In particular, article 4 of the UNCITRAL Model Law on Electronic Commerce allows variation by agreement of the provisions on electronic communications, but sets limits to variation by agreement of functional equivalence rules, also to avoid circumventing form requirements of mandatory application. Moreover, party autonomy may not affect rights and obligations of third parties.<sup>36</sup>

49. In addition, article 5 of the UNCITRAL Model Law on Electronic Signatures indicates that parties may derogate from all provisions of that Model Law, unless derogation would not be valid or effective under applicable law, i.e. it would affect rules of mandatory application such as those relating to public policy.<sup>37</sup> A similar approach is adopted in article 3 of the Electronic Communications Convention.<sup>38</sup>

50. Similarly, the Model Law recognizes party autonomy within the limits of mandatory law and without affecting rights and obligations of third parties. The Model Law does not indicate which provisions may be derogated from or varied by agreement; it is for enacting jurisdictions to identify them. In doing so, it may be useful to consider that variance in the enactment of the Model Law may significantly disrupt uniformity. In that respect, enacting jurisdictions should carefully consider the possibility of allowing derogation from the fundamental principles underlying the Model Law (see above, para. 44) and, in particular, from functional equivalence rules, and the consequences thereof.

51. Certain jurisdictions, in particular those belonging to the civil law tradition, recognize the principle of *numerus clausus* of transferable documents or instruments. The Model Law does not aim to offer means of circumventing that principle by agreement, in line with the general principle that the Model Law does not affect substantive law provisions. At the same time, and based on the same general principle, the Model Law does not limit in any way the ability of the parties to derogate from or vary substantive law.

52. Therefore, a careful analysis is necessary to ascertain which provisions of the Model Law could be derogated from or varied by the parties. The Model Law leaves this assessment to the enacting jurisdiction, in order to accommodate differences in legal systems. To that end, paragraph 1 contains square brackets, in which the enacting jurisdiction could identify the provisions which could be derogated from or varied (see also below, para. 138).

<sup>36</sup>UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, paras. 44-45.

<sup>37</sup>UNCITRAL Model Law on Electronic Signatures, Guide to Enactment, paras. 111-114.

<sup>38</sup>United Nations Convention on the Use of Electronic Communications in International Contracts, Explanatory Note, para. 85.

*References*

A/72/17, paragraph 83; A/CN.9/768, paragraphs 36-37; A/CN.9/797, paragraphs 30-32 and 113; A/CN.9/869, paragraphs 32-44.

*Article 5. Information requirements*

53. Article 5, inspired by article 7 of the Electronic Communications Convention,<sup>39</sup> highlights the need to comply with possible disclosure obligations that might exist under other law. Examples of those information requirements include information to be provided under consumer protection law and to prevent money-laundering and other criminal activities.

54. The obligation to comply with those information requirements arises from the principle contained in article 1, paragraph 2, of the Model Law that the Model Law does not affect substantive law. The reference to other law containing the information requirements provides desirable flexibility since those requirements are likely to change over time. Article 5 does not deal with the legal consequences attached to violating information requirements, which are to be found, like the information requirement itself, in other law.

55. Article 5 does not prohibit the issuance of an electronic transferable record to bearer when permitted under substantive law. In that respect, it should be noted that an electronic transferable records management system may allow for identification of the person in control of an electronic transferable record for regulatory purposes (e.g., anti-money-laundering) but not for commercial law purposes (e.g., for an action in recourse).

*References*

A/CN.9/768, paragraph 38; A/CN.9/797, paragraph 33; A/CN.9/869, paragraphs 45-47.

*Article 6. Additional information in electronic transferable records*

56. As a general rule, according to article 10, paragraph 1(a), of the Model Law, an electronic transferable record should contain the information required to be contained in a transferable document or instrument (see below, paras. 89-93; see also below, paras. 164 and 179). The Model Law does not

<sup>39</sup>United Nations Convention on the Use of Electronic Communications in International Contracts, Explanatory Note, paras. 122-128.

require the insertion of information additional to that contained in a transferable document or instrument for the issuance and use of an electronic transferable record. Requiring that additional information would create a legal requirement that does not exist with respect to the issuance and use of transferable documents or instruments and therefore could constitute discrimination against the use of electronic means.

57. Adding to that general rule, article 6 clarifies that the electronic transferable record may, but does not need to contain information additional to that contained in the transferable document or instrument. In other words, while the Model Law does not impose any additional information requirement for electronic transferable records, it also does not prevent the inclusion in those records of additional information that may not be contained in a transferable document or instrument due to the different nature of the two media.

58. Examples of such additional information include information necessary for technical reasons, such as metadata or a unique identifier. Moreover, such additional information could consist of dynamic information, i.e. information that may change periodically or continuously, based on an external source, which may be included in an electronic transferable record due to its nature but not in a transferable document or instrument. The price of a publicly-traded commodity and the position of a vessel are examples of dynamic information. However, article 1, paragraph 2, of the Model Law precludes inclusion in an electronic transferable record of additional information not permitted under substantive law.

### *References*

A/CN.9/761, paragraph 32; A/CN.9/768, paragraph 66; A/CN.9/797, paragraphs 70-73; A/CN.9/869, paragraphs 101-102.

## *Article 7. Legal recognition of an electronic transferable record*

### *Paragraph 1*

59. Paragraph 1 restates the general principle of non-discrimination against the use of electronic means that is set forth in article 5 of the UNCITRAL Model Law on Electronic Commerce<sup>40</sup> and in article 8, paragraph 1, of the Electronic Communications Convention.<sup>41</sup>

<sup>40</sup>UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, para. 46.

<sup>41</sup>United Nations Convention on the Use of Electronic Communications in International Contracts, Explanatory Note, para. 129.



60. By stating that information “shall not be denied legal effect, validity or enforceability on the sole ground that it is in electronic form”, paragraph 1 merely indicates that the form in which an electronic transferable record is presented or retained cannot be used as the only reason for which that record would be denied legal effectiveness, validity or enforceability. However, the provision should not be misinterpreted as establishing the legal validity of an electronic transferable record or any information it contains.

*Paragraphs 2 and 3*

61. Paragraphs 2 and 3 are inspired by article 8, paragraph 2, of the Electronic Communications Convention.<sup>42</sup>

62. Paragraph 2 clarifies that legal recognition of electronic transferable records does not imply a requirement to use or accept them. However, this does not preclude enacting jurisdictions from mandating the use of electronic transferable records, at least with respect to some categories of users and some types of transferable documents and instruments, in light of the policy goals pursued.

63. The requirement of consent to the use of an electronic transferable record is a general one and applies to all instances where an electronic transferable record is used under the Model Law and to all parties involved in the life cycle of the electronic transferable record. Therefore, other provisions of the Model Law do not contain an explicit reference to consent.

64. The consent to using electronic transferable records does not need to be expressly indicated or given in any particular form and may be inferred from all circumstances, including parties’ conduct. While absolute certainty can be accomplished by obtaining an explicit consent before using an electronic transferable record, such explicit consent should not be mandated as it would create an unreasonable barrier to the use of electronic means.

65. Certain systems used for electronic transferable records management, such as registry-based systems, may require acceptance of system rules prior to authorizing access to the system. Those system rules may include or imply consent to the use of electronic transferable records.

66. Consent to the use of an electronic transferable record in systems that lack a centralized operator, such as some token-based and distributed ledger-based systems, may be implicit and inferred by circumstances such as exercise of control of the record or performance of the obligation contained in the record.

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<sup>42</sup>United Nations Convention on the Use of Electronic Communications in International Contracts, Explanatory Note, paras. 131-132.

*References*

A/CN.9/768, paragraphs 39, 57-58; A/CN.9/797, paragraphs 34-35, 62-63; A/CN.9/804, paragraph 17; A/CN.9/869, paragraphs 93 and 94.

## CHAPTER II. PROVISIONS ON FUNCTIONAL EQUIVALENCE

67. Any reference to a legal requirement contained in the provisions of the Model Law setting forth functional equivalence rules implies a reference to the consequences arising when a legal requirement is not met, making it unnecessary to explicitly refer to those consequences. Accordingly, the Model Law does not contain the words “or provides consequences” after the words “when the law requires”.

*Reference*

A/CN.9/834, paragraphs 43 and 46.

*Techniques of enactment of articles 8 and 9*

68. Provisions indicating the requirements for functional equivalence of the notions of “writing” and “signature” in an electronic environment are of fundamental importance for the application of UNCITRAL texts on electronic commerce. While the enactment of the Model Law requires the adoption of those functional equivalence standards, such adoption could take place with different techniques.

69. A law on electronic transactions is likely to contain such functional equivalence provisions, possibly based on UNCITRAL uniform texts. The general rules on functional equivalence between electronic and written form contained in the law on electronic transactions apply to all electronic records that are not transferable.

70. If the Model Law is adopted by consolidation with an enactment of the UNCITRAL Model Law on Electronic Commerce or other text providing general rules on functional equivalence, it may be possible to adopt provisions for the functional equivalence of the paper-based notions of “writing” and “signature” that will apply to both transferable and non-transferable electronic records.

71. However, it may also be the case that those functional equivalence provisions do not exist in a jurisdiction wishing to enact the Model Law. In that case, the adoption of articles 8 and 9 would address the legislative need.

72. In any case, careful consideration should be given to the consequences of establishing a dual regime setting forth different functional equivalence requirements for electronic records and electronic transferable records.

#### *Reference*

A/CN.9/897, paragraphs 54-57.

### *Article 8. Writing*

73. Article 8 establishes the requirements for the functional equivalence of the written form with respect to information contained in or related to electronic transferable records. It is inspired by article 6, paragraph 1, of the UNCITRAL Model Law on Electronic Commerce.<sup>43</sup> Article 8 refers to the notion of “information” rather than “communication” as not all relevant information might necessarily be communicated, depending on the system chosen for electronic transferable records management.

74. Article 8 sets forth a functional equivalence rule for the notion of “writing” with respect to electronic transferable records only. The use of writing is instrumental in performing several actions that may occur during the life cycle of an electronic transferable record, such as endorsement (see below, para. 151). The provisions on functional equivalence of written and electronic form contained in the law on electronic transactions apply to all electronic records that are not transferable.

#### *References*

A/CN.9/768, paragraphs 40-44; A/CN.9/797, paragraphs 36-39; A/CN.9/804, paragraphs 18-19.

### *Article 9. Signature*

75. Article 9 establishes the requirements for the functional equivalence of “signature” when substantive law either contains an explicit signature requirement or provides consequences for the absence of a signature (implicit signature requirement). The words “or permits” clarify that article 9 should apply also to cases when the law permits, but does not require a signature. Reference to electronic signatures in article 9 of the Model Law is intended also as a reference to electronic seals or other methods used to enable the signature of a person electronically.

<sup>43</sup>UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, paras. 47-50.

76. Article 9 is inspired by article 7, paragraph 1(a), of the UNCITRAL Model Law on Electronic Commerce.<sup>44</sup> Moreover, following the text of article 9, paragraph 3, of the Electronic Communications Convention, it refers to the “intention” of the party so as to better capture the different functions that may be pursued with the use of an electronic signature.<sup>45</sup> The reliability of the method referred to in article 9 should be assessed according to the general reliability standard contained in article 12.

77. The reference to the signature requirement being fulfilled “by” an electronic transferable record is meant to clarify that article 9 applies to electronic transferable records only and not to other electronic records that are not transferable but are somehow related to an electronic transferable record. Hence, article 9 sets forth a functional equivalence rule for the notion of “signature” with respect to electronic transferable records only.

78. Certain electronic transferable records management systems, such as those based on distributed ledgers, may identify the signatory by referring to pseudonyms rather than to real names. That identification, and the possibility of linking pseudonym and real name, including based on factual elements to be found outside distributed ledger systems, could satisfy the requirement to identify the signatory.

79. The general rule on functional equivalence of electronic and handwritten signatures contained in the law on electronic signatures applies to signatures used in relation to all electronic records that are not transferable.

#### *References*

A/CN.9/768, paragraphs 41 and 43; A/CN.9/797, paragraphs 40-47; A/CN.9/804, paragraph 20; A/CN.9/869, paragraphs 48-49.

#### *Article 10. Transferable documents or instruments*

80. Article 10 provides a functional equivalence rule for the use of transferable documents or instruments by setting forth the requirements to be met by an electronic record. The reliability of the method referred to in article 10 should be assessed according to the general reliability standard contained in article 12.

81. Article 10 represents the outcome of discussions originating from the notion of “uniqueness” of a transferable document or instrument. The purpose

<sup>44</sup>UNCITRAL Model Law on Electronic Commerce, Guide to Enactment, paras. 53-56.

<sup>45</sup>United Nations Convention on the Use of Electronic Communications in International Contracts, Explanatory Note, para. 160.

of that notion is to prevent the circulation of multiple documents or instruments relating to the same performance and thus to avoid the existence of multiple claims for performance of the same obligation. Providing a guarantee of uniqueness in an electronic environment functionally equivalent to an original or authentic document or instrument in the paper world has long been considered a peculiar challenge.

82. Uniqueness is a relative notion that poses technical challenges in an electronic environment, as providing an absolute guarantee of non-replicability may not be technically feasible and as the identification of the specific record that is supposed to constitute the equivalent to the respective transferable document or instrument is not obvious due to the lack of a tangible medium. In fact, the notion of uniqueness poses challenges also with respect to transferable documents or instruments, since paper does not provide an absolute guarantee of non-replicability. However, a paper document, as a physical object, is by nature unique and, furthermore, centuries of use of paper in business transactions have provided sufficient information to commercial operators for an assessment of the risks associated with the use of that medium, while practices relating to the use of electronic transferable records are not yet equally well established.

83. Article 10 aims at preventing the possibility of the existence of multiple claims to perform the same obligation by combining two approaches, i.e. “singularity” and “control”.

84. The “singularity” approach requires reliable identification of the electronic transferable record that entitles its holder to request performance of the obligation indicated in it, so that multiple claims of the same obligation would be avoided. The “control” approach focuses on the use of a reliable method to identify the person in control of the electronic transferable record (see also below, paras. 105-121).

85. One effect of the adoption of the notions of “singularity” and “control” in the Model Law is the prevention of unauthorized replication of an electronic transferable record by the system.

86. The definition of “electronic transferable record” reflects the functional equivalent approach and refers to electronic transferable records that are equivalent to transferable documents or instruments. It does not aim to affect the principle that substantive law should determine the rights of the person in control. Likewise, it does not aim to describe all the functions possibly related to the use of an electronic transferable record. For instance, an electronic transferable record may also have an evidentiary value; the ability of that record to discharge that function will be assessed under law other than the Model Law.

87. In line with the general approach and the scope of the Model Law, the definition of “electronic transferable record” is intended to apply to electronic transferable records that are functionally equivalent to transferable documents or instruments. Yet, the Model Law does not preclude the development and use of electronic transferable records that do not have a paper equivalent as those records are not governed by the Model Law.

88. The definition of “electronic transferable record” does not cover certain documents or instruments, which are generally transferable, but whose transferability may be limited due to other agreements, for example in the case of straight bills of lading. The definition of “electronic transferable record” should not be interpreted as preventing the issuance of those documents or instruments in an electronic transferable records management system (see also above, para. 21). Substantive law should determine which documents or instruments are transferable.

*Paragraph 1(a)*

89. Paragraph 1(a) states that the electronic record should contain the information required to be in a transferable document or instrument. Since information in a transferable document or instrument is in writing, its inclusion in an electronic transferable record must comply with article 8 of the Model Law. The definition of “electronic record” contained in article 2 of the Model Law clarifies that the electronic record may, but does not need to, have a composite nature.

90. The inclusion in the electronic transferable record of the information required to be contained in a transferable document or instrument should allow to determine the substantive law applicable to that electronic transferable record (e.g., the law applicable to a bill of lading, rather than the law applicable to a promissory note). Nevertheless, one electronic transferable record may contain information that would be required to be contained in more than one type of transferable document or instrument.

91. A law that does not contain a provision akin to that contained in article 10, paragraph 1(a), but which sets forth directly the information requirements to be contained in an electronic transferable record, is likely to provide for electronic transferable records that are not functionally equivalent to transferable documents or instruments, but exist only in an electronic environment.

92. Accordingly, an electronic transferable record existing only in electronic form would not satisfy the requirements of article 10 and would not fall under the definition of electronic transferable record contained in article 2. Namely, while an electronic transferable record existing only in electronic form could satisfy other requirements set forth in the Model Law, that record would define

autonomously the information requirements and therefore would not comply with article 10, paragraph 1(a).

93. Paragraph 1(a) does not contain any qualifier such as “equivalent”, “corresponding” or “as having the same purpose” given that under that provision an electronic transferable record must indicate the same information as the information required for a transferable document or instrument of the same type. Insertion of a further qualifier might create uncertainty.

*Paragraph 1(b)(i)*

94. Paragraph 1(b)(i) sets forth the requirement to identify an electronic record as the record containing the information necessary to establish that record as the electronic transferable record. That requirement implements the “singularity” approach.

95. The purpose of the provision is to identify the electronic transferable record that is the functional equivalent of the transferable document or instrument.

96. The combination of the article “the” and singular noun in the Arabic, English, French and Spanish language versions of the Model Law suffices to point at the singularity approach. A qualifier is omitted to avoid interpretative challenges. A qualifier could be interpreted as referring to the notion of uniqueness, which has been abandoned and could ultimately foster litigation. A qualifier is used in the Chinese and Russian language versions of the Model Law because the proper qualifier may be found in those languages to avoid interpretation problems. All six language versions are intended to convey the same notion.

97. Unlike other legislation on electronic transferable records, paragraph 1(b)(i) does not refer to a qualifier such as “authoritative”, “operative” or “definite” to identify the electronic record as the electronic transferable record. The reasons for that omission are that: insertion of a qualifier could create interpretative challenges, especially in certain languages; it could be interpreted as referring to the notion of “uniqueness”, which has been abandoned; and it could ultimately foster litigation.

*Paragraph 1(b)(ii)*

98. Paragraph 1(b)(ii) sets forth the requirement that the electronic transferable record should be capable of being controlled from the time of its creation until it ceases to have any effect or validity, particularly in order to allow for its transfer. That requirement implements the “control” approach.

99. The reference to a reliable method with respect to paragraph 1(b)(ii) refers to the reliability of the system used to render the electronic record capable of being subject to control. While the same general reliability standard contained in article 12 applies to the various articles of the Model Law, and is therefore objective, the assessment of the reliability of each method is to be carried out in light of the specific function pursued by the use of that method, and is therefore relative.

*Paragraph 1(b)(iii)*

100. The notion of integrity is an absolute one. It refers to a fact, and as such, is objective, i.e. either an electronic transferable record retains integrity or it does not. The reference to the reliable method used to retain integrity is relative since the assessment of the reliability of each method is to be carried out in light of the specific function pursued by the use of that method. The general reliability standard contained in article 12 applies to the assessment of that method.

*Paragraph 2*

101. Paragraph 2 sets forth a provision on the assessment of the notion of integrity. It indicates that an electronic transferable record retains integrity when any set of information related to authorized changes (as opposed to changes of purely technical nature) remains complete and unaltered from the time of the creation of the electronic transferable record until it ceases to have any effect or validity. For example, in practice, verification of the integrity of the electronic transferable record could be achieved if a reliable assurance is provided of the link between an electronic signature affixed on the record and the content of that record at the time the electronic signature was affixed.

102. Paragraph 2 is inspired by article 8, paragraph 3, of the UNCITRAL Model Law on Electronic Commerce. However, it should be noted that article 8, paragraph 3(a), of the Model Law on Electronic Commerce refers to a notion of integrity with respect to the use of the notion of “original” that may be more appropriate for electronic contracting. On the other hand, the notion of integrity contained in article 10, paragraph 2, of the Model Law necessarily takes into account the fact that the life cycle of electronic transferable records implies a number of events that need to be accurately reflected in those records.

103. “Authorized” changes are those changes agreed upon by the parties to contractual obligations related to electronic transferable records throughout the life cycle of those records and permitted by the electronic transferable records management system. The use of the term “authorized” does not address the legitimacy of those changes, which would introduce a standard presupposing



a legal assessment under substantive law. For instance, unauthorized changes could include those performed by a hacker who must compromise the integrity of the electronic transferable record in order to gain access to it.

104. The words “apart from any change which arises in the normal course of communication, storage and display” refer to information added to an electronic transferable record for purely technical purposes. For instance, that information could include changes necessary to store the electronic transferable records in a dedicated repository. The same words are used in article 8, paragraph 3(a), of the UNCITRAL Model Law on Electronic Commerce. However, the notion of purely technical change should be evaluated against the notion of integrity contained in the Model Law, which differs from the notion of original contained in the Model Law on Electronic Commerce (see below, paras. 189-190). The fact that information may be added automatically by the electronic transferable records management system, for instance in the form of metadata, is not per se evidence that that information is of a purely technical nature.

#### *References*

A/CN.9/768, paragraphs 48-56, 75-76 and 85; A/CN.9/797, paragraphs 47-60; A/CN.9/804, paragraphs 21-40, 70-75; A/CN.9/828, paragraphs 31-40, 42-49; A/CN.9/834, paragraphs 21-30, 85-90, 92, 99-108; A/CN.9/869, paragraphs 50-68.

#### *Article 11. Control*

105. Article 11 provides a functional equivalence rule for the possession of a transferable 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.

106. The notion of “control”, which is closely related to the requirement contained in article 10, paragraph 1(b)(ii), is not defined in the Model Law since it is the functional equivalent of the notion of “possession”, which, in turn, may vary in each jurisdiction.

107. The Model Law is concerned with identifying a functional equivalent to the fact of possession. In line with the general principle that the Model Law does not affect substantive law, the notion of control does not affect or limit the legal consequences arising from possession. Consequently, parties may agree on the modalities for the exercise of possession, but may not modify the notion of possession itself.

108. The Model Law is not intended to restrict the creation of security rights in transferable documents or instruments. Thus, control under article 11 provides the functional equivalent in those cases where the security rights would be created and made effective against third parties by possession of a paper document or instrument. The Model Law is also not intended to limit the creation of security rights where those rights would be made effective against third parties by their registration in a public registry.

109. The title of article 11 refers to “control” and not to “possession”, thus departing from the naming style of other articles of the Model Law, since the notion of “control” is particularly relevant in the Model Law. While a notion of “control” may exist in national legislation, the notion of “control” contained in article 11 needs to be interpreted autonomously in light of the international character of the Model Law.

#### *Paragraph 1*

110. Paragraph 1 includes the words “or permits” in order to clarify its application to cases in which the law merely permits, but does not require possession of a transferable document or instrument. The reliability of the method referred to in article 11 should be assessed in accordance with the general reliability standard contained in article 12.

#### *Paragraph 1(a)*

111. Paragraph 1(a) refers to “exclusive” control for reasons of clarity, since the notion of “control”, similarly to that of “possession”, implies exclusivity in its exercise. Yet, control, like possession, could be exercised concurrently by more than one person. The concept of “control” does not refer to “legitimate” control, since this is a matter of substantive law.

112. Although both the notion of “control” and the notion of “singularity” aim at preventing multiple requests for performance of the same obligation, the two notions operate independently and should be distinguished (see above, paras. 83-84). For instance, it is possible to conceive of exclusive control over a multiple record, i.e. a record that does not meet the requirement of singularity. Conversely, it is also possible to conceive of non-exclusive control over a single record.

#### *Paragraph 1(b)*

113. Paragraph 1(b) requires the person in control of the electronic transferable record to be reliably identified as such. The person in control of an electronic transferable record is in the same legal position as the possessor of an equivalent transferable document or instrument.

114. The reference to the “person in control” of the electronic transferable record in paragraph 1(b) does not imply that the person is also the rightful person in control of that record as this is for the substantive law to determine. Further, the reference to the person in control does not exclude the possibility of having more than one person exercising control or of attributing selectively control of one electronic transferable record to multiple entities on the basis of the legal rights attributed to each entity (e.g., title to property of goods or security interests).

115. The person in control may be a natural or legal person or other entity able to possess a transferable document or instrument under substantive law. The use of the services of a third party to exercise exclusive control does not affect exclusivity of control. It neither implies nor excludes the possibility that such a third-party service provider or any other intermediary is a person in control. The person in control is to be determined by the applicable substantive law.

116. The requirement to identify the person in control does not imply that an electronic transferable record in itself should contain the information relating to the identification of the person in control. Rather, that requirement demands that the method or system employed to establish control as a whole should perform the identification function with respect to all concerned parties. Moreover, identification should not be understood as implying an obligation to name the person in control, as the Model Law allows for the issuance of electronic transferable records to bearer, which implies anonymity.

117. Certain electronic transferable records management systems, such as those based on distributed ledgers, may identify the person in control by referring to pseudonyms rather than to real names (see above, para. 78). That identification, and the possibility of linking pseudonym and real name, if need be, would satisfy the requirement to identify the person in control. In any case, anonymity for commercial law purposes may not preclude the possibility of identifying the person in control for other purposes, such as law enforcement (see above, para. 55).

118. Article 11 will also assist in carrying out those steps occurring in the life cycle of the electronic transferable record that require demonstration of control of that record. For instance, the notion of “presentation” in the paper environment relies on demonstration of possession of a transferable document or instrument as its core element. That demonstration may be given by identifying the person in control. In practice, the electronic transferable records management system may rely on the requirement to identify the person in control contained in article 11 when dealing with presentation of a record. Accordingly, the Model Law does not contain a separate provision on presentation.

*Paragraph 2*

119. Transferable documents or instruments, and therefore also electronic transferable records, may circulate by delivery and by endorsement. Paragraph 2 sets forth that transfer of control over an electronic transferable record is the functional equivalent of delivery, i.e. transfer of possession, of a transferable document or instrument (see also below, paras. 150-154). Transfer of control implies transfer of exclusive control since the notion of “control”, similarly to that of “possession”, implies exclusivity in its exercise. The considerations on the joint exercise of control apply also to transfer of control (see above, paras. 111 and 114).

120. Paragraph 2 includes the words “or permits” in order to clarify its application to cases in which the law merely permits, but does not require, transfer of possession of a transferable document or instrument.

121. The delivery of a transferable document or instrument may be a necessary step in the life cycle of that document or instrument. For instance, the request for delivery of goods typically requires the surrender of a bill of lading. The Model Law does not contain specific provisions on surrender, since paragraph 2, which governs transfer of control as the functional equivalent of transfer of possession and thus of delivery, would apply also to those cases.

*References*

A/CN.9/761, paragraphs 24-25, 38-41 and 50-58; A/CN.9/768, paragraphs 45-47 and 75-85; A/CN.9/797, paragraphs 66 and 74-90; A/CN.9/804, paragraphs 51-70; A/CN.9/828, paragraphs 50-67; A/CN.9/834, paragraphs 31-33 and 83-94; A/CN.9/863, paragraphs 27-36 and 99-102; A/CN.9/869, paragraphs 103-110.

### **CHAPTER III. USE OF ELECTRONIC TRANSFERABLE RECORDS**

*Article 12. General reliability standard*

122. Article 12 provides a consistent and technology neutral general standard on the assessment of reliability that applies whenever a provision of the Model Law requires the use of a “reliable method” for the fulfilment of its functions. The concept of reliability refers to the reliability of the method used. In turn, reference to the method implies reference to any system used to implement that method.

123. Article 12 aims to increase legal certainty by indicating elements that may be relevant in assessing reliability. The list of circumstances contained in article 12 is illustrative and, as such, not exhaustive and does not prevent the parties from allocating liability contractually (see also paras. 138-139 below). The general reliability standard is applicable to all electronic transferable records management system providers and not only to third-party service providers.

124. Though article 12 aims at providing guidance on the assessment of the reliability of the electronic transferable records management system in case of dispute (“ex post” reliability assessment), its content will necessarily also influence the design of the system (“ex ante” reliability assessment) since system designers pursue offering the provision of reliable systems.

125. Each provision of the Model Law referring to the use of a reliable method aims at fulfilling a different function. Accordingly, the reference to “the purposes of articles” contained in the chapeau of article 12 aims to clarify that the assessment of the reliability of each relevant method should be carried out separately in light of the function specifically pursued by the use of that method. That approach provides needed flexibility when assessing the application of the reliability standard in practice as it allows customization of the reliability assessment to each function fulfilled by the system.

#### *Subparagraph (a)*

126. Subparagraph (a) contains a list of circumstances that may assist in determining reliability. The words “which may include” clarify that the list is only illustrative and not exhaustive. The words “all relevant circumstances” include the purpose for which the information contained in the electronic transferable record was generated.

127. The list of circumstances aims at achieving a balance between providing guidance on the assessment of reliability and imposing requirements that may result in excessive costs for business, ultimately hampering electronic commerce and leading to increased litigation on complex technical matters. Additional possibly relevant circumstances include: quality of staff; sufficient financial resources and liability insurance; and the existence of a notification procedure for security breaches as well as of reliable audit trails.

#### *“Operational rules”*

128. Subparagraph (a)(i) refers to “operational rules” that are usually contained in an operating manual whose application could be monitored by an oversight body and that, as such, may not have a purely contractual nature. The

words “relevant to the assessment of” clarify that only operational rules regarding the reliability of the system, and not operational rules in general, should be considered.

*“Assurance of data integrity”*

129. Subparagraph (a)(ii) refers to the “assurance of data integrity” as an absolute notion since data integrity cannot be expressed by reference to a level. The notion of “integrity” as an element in the assessment of the general reliability standard is different from that contained in article 10. More precisely, the notion of integrity contained in subparagraph (a)(ii) applies when integrity is in fact relevant to assessing the reliability of the method used and, ultimately, the achievement of functional equivalence. As such, that notion is also relevant to articles other than article 10.

*“Prevent unauthorized access to and use of the system”*

130. This circumstance refers to the ability to prevent access to and use of the system by parties, including third parties, not authorized to do so, as authorization of access to and use of the system is a notion relevant to all parties. In that respect, it should be noted that the notion of integrity in the Model Law refers to “authorized” changes. A reliable method should therefore prevent unauthorized changes. Moreover, the notion of control is based on exclusivity, which presupposes the ability to exclude parties that do not have authorized access to the system.

*“Security of hardware and software”*

131. Reference to “security of hardware and software” is included in the list of criteria for the assessment of the general reliability standard for electronic transferable records, since security of hardware and software has a direct impact on the reliability of the method used. A similar reference is found in article 10, subparagraph (b), of the UNCITRAL Model Law on Electronic Signatures, which refers to the “quality of hardware and software systems” as one of the factors to be considered in determining the trustworthiness of systems and procedures utilized by a certification service provider. The term “security” is used in subparagraph (a)(iv) instead of “quality” since the notion of security lends itself more easily to an objective assessment.

*“Regularity and extent of audit by an independent body”*

132. The existence of regular accurate audits carried out by an independent body may be seen as evidence of validation of the reliability of the system by a third party. Similarly, article 10, subparagraph (e), of the UNCITRAL Model

Law on Electronic Signatures refers to the “regularity and extent of audit by an independent body” as one of the factors to be considered for determining the trustworthiness of systems, procedures and human resources utilized by a certification service provider.

*“Declaration by a supervisory body, an accreditation body or a voluntary scheme regarding the reliability of the method”*

133. The criteria of “regularity and extent of audit by an independent body” is inspired by article 10, subparagraph (f), of the UNCITRAL Model Law on Electronic Signatures, which refers to the “declaration by the State, an accreditation body or the certification service provider regarding compliance with or existence of the foregoing” as one of the factors to be regarded to determine the trustworthiness of systems, procedures and human resources utilized by a certification service provider. A declaration by such body may guarantee a certain level of objectivity in the assessment of the reliability of the method used.

*“Any applicable industry standard”*

134. The reference to “any applicable industry standard” stems from a suggestion to refer to internationally accepted standards and practices in order to avoid increased litigation based on complex technical matters and to allow flexibility in technology choice while providing guidance. The fact that electronic transferable records management systems are likely to be designed and maintained by highly specialized professionals may also be relevant in that context.

135. Reference to “any applicable industry standard” is more suitable than reference to “industry best practices” since the former can be more easily ascertained. Applicable industry standards should preferably be internationally recognized. In fact, the use of international standards may promote the emergence of a common notion of reliability across jurisdictions. Reference to industry standards should not be interpreted so as to violate the principle of technological neutrality or to favour the industry standards of one sector over those of others, which could be detrimental to supply chain management.

*Subparagraph (b)*

136. Subparagraph (b) provides a “safety clause” with the purpose of preventing frivolous litigation by validating methods that have in fact achieved their function regardless of any assessment of their reliability. It refers to the fulfilment of the function in the specific case under dispute and does not aim at predicting future reliability based on past performance of the method. The provision may operate with respect to any of the functions pursued with the

use of electronic transferable records. A similar mechanism is contained in article 9, paragraph 3(b)(ii), of the Electronic Communications Convention, relating to the functional equivalence of electronic signatures.

137. In practice, the fact that the method used has achieved the function pursued with its use will prevent any discussion on the assessment of its reliability according to subparagraph (a).

#### *Party autonomy*

138. Article 12 does not contain an explicit reference to the relevance of an agreement of the parties when assessing reliability. That omission is due to the desire to provide an objective reliability standard and therefore not to make it dependent on party autonomy. In particular, the inclusion of a reference to party autonomy could be read as: (a) introducing different standards for the assessment of reliability whose application would depend on the parties involved; (b) leading to inconsistent findings in respect of the validity of the electronic transferable record; and (c) circumventing substantive law, especially provisions of mandatory application, and ultimately affecting third parties. Hence, party autonomy with respect to the assessment of reliability is limited to allocation of liability under the limits set forth in applicable law.

139. The relevance of party agreements may be particularly significant in the context of closed systems or when referring to industry standards, since those agreements often contain useful guidance on technical details and may promote technological innovation within the limits of mandatory substantive law.

#### *References*

A/CN.9/804, paragraphs 41-49 and 63; A/CN.9/828, paragraphs 47-49; A/CN.9/863, paragraphs 37-76; A/CN.9/869, paragraphs 69-78.

### *Article 13. Indication of time and place in electronic transferable records*

140. Significant legal consequences are attached to the indication of time and place in transferable documents and instruments. For instance, recording the time of an endorsement is necessary to establish the sequence of the obligors in the action of recourse. Article 13 allows for that indication in electronic transferable records. In the case of endorsements, this is particularly important given that the dematerialized nature of electronic transferable records does not make their temporal sequence apparent as in transferable documents or instruments.



141. Provisions relating to the indication of time and place, if any, are to be found in substantive law, which may indicate to what extent and which parties may agree on it. If the indication of time and place is mandatory under substantive law, that requirement must be complied with in accordance with article 10, paragraph 1(a), of the Model Law, mandating that the electronic transferable record should contain the information “required to be contained in a transferable document or instrument”.

142. The words “or permits” clarify that article 13 should apply also to cases when the law permits, but does not require, the indication of time or place with respect to a transferable document or instrument. In line with the general rule that the Model Law does not impose any additional information requirement, article 13 does not require the indication of time and place when that information is not mandatory under applicable law.

143. Methods available to indicate time and place in electronic transferable records may vary with the system used. Therefore, article 13 is based on a technology-neutral approach compatible with systems based on registry, token, distributed ledger or other technology. The reference to the use of a reliable method in indicating time points to the possibility of using trust services such as trusted time stamping.

144. The nature of the electronic transferable record may enable automation of certain steps in the life cycle of the record related to time. For instance, promissory notes may be presented for payment automatically on the due date.

145. The provisions on time and place of dispatch and receipt of data messages (article 15 of the UNCITRAL Model Law on Electronic Commerce) and of electronic communications (article 10 of the Electronic Communications Convention) are relevant for contract formation and management, but may not be appropriate with respect to the use of electronic transferable records.

#### *References*

A/CN.9/797, paragraph 61; A/CN.9/834, paragraphs 36-46; A/CN.9/863, paragraphs 23-24, 26; A/CN.9/869, paragraphs 79-82.

#### *Article 14. Place of business*

146. The law may attach a number of consequences to the place of business. In particular, the place of business may be relevant for the cross-border use of electronic transferable records. Substantive law should indicate how to identify the relevant place of business, which, in principle, does not need to be

different only because of the use of an electronic or paper medium. The scope of article 14 is limited to clarifying that the location of an information system, or parts thereof, is not an indicator of a place of business as such. That clarification may be particularly useful in light of the likelihood that third parties providing services relating to the management of electronic transferable records will use equipment and technology located in various jurisdictions, or whose location may change regularly, such as in the case of use of cloud computing.

147. Article 14, whose text is inspired by article 6, paragraphs 4 and 5, of the Electronic Communications Convention,<sup>46</sup> aims at providing guidance on the determination of a place of business when electronic means are used by indicating that certain elements do not per se identify a place of business. Its scope is therefore different from that of article 13, which relates to the indication of the place in the electronic transferable record, and not to its determination.

148. Reference to “place of business” should be interpreted as reference to the various notions related to geographic location (e.g., residence or domicile) that may be relevant during the life cycle of the electronic transferable record. While the elements listed in article 14 do not, per se, determine the location of a place of business, those elements may be used together with other elements to determine that location.

149. Substantive law may allow parties to identify the place of business by agreement. In that case, article 14 may provide a set of suppletive rules on the determination of the place of business that could usefully complement parties’ agreements.

### *References*

A/CN.9/863, paragraphs 25-26; A/CN.9/869, paragraphs 83-92.

## *Article 15. Endorsement*

150. Transferable documents or instruments may be transferred by delivery and by endorsement. Substantive law sets forth the conditions for the circulation of transferable documents or instruments, which apply to functionally equivalent electronic transferable records. Article 15 identifies the requirements that need to be complied with in order to achieve functional equivalence of endorsement in addition to the requirements for functional equivalence of written form and signature.

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<sup>46</sup>United Nations Convention on the Use of Electronic Communications in International Contracts, Explanatory Note, paras. 116-121.

151. While national laws may contain a wide range of formal prescriptions for endorsement in a paper-based environment, article 15 aims to achieve functional equivalence of the notion of endorsement regardless of those requirements and in line with the approach taken for other functional equivalence rules in the Model Law. Hence, article 15 adds to the functional equivalence rules for writing, signature and transfer already contained in the Model Law by also providing for specific forms of endorsement required under substantive law, such as endorsements on the back of a transferable document or instrument or by affixing an *allonge*.

152. Inserting in article 15 specific references to certain form requirements, but not to others, might be interpreted as excluding those other requirements from the scope of the article, thus ultimately frustrating its purpose. Hence, article 15 does not refer to any specific form of requirement, but includes all of them.

153. The words “or permits” are included in article 15 to provide for instances when substantive law allows for, but does not require, endorsement.

154. The words “included in” have been chosen to reflect current practice more accurately and to encompass instances when the information is logically associated with or otherwise linked to the electronic transferable record, thus enabling the use of different models for electronic transferable records management systems in line with the principle of technological neutrality.

#### *References*

A/CN.9/768, paragraphs 46, 102; A/CN.9/797, paragraphs 95-97; A/CN.9/804, paragraphs 80-81; A/CN.9/828, paragraphs 76-80; A/CN.9/869, paragraphs 111-114.

#### *Article 16. Amendment*

155. Substantive law or contractual agreements may permit the amendment of a transferable document or instrument and specify who has the authority to amend, under what circumstances and whether a duty to notify third parties of the amendment exists. Article 16 provides a functional equivalence rule for instances in which an electronic transferable record may be amended.

156. The amendments referred to in article 16 are of a legal nature. Amendments of a purely technical nature do not fall under the scope of article 16. (See also above, para. 101, on the reference to “any change which arises in the normal course of communication, storage and display” contained in article 10, paragraph 2, of the Model Law.)

157. Article 16 sets forth an objective standard, as indicated by the use of the word “identified”, for the identification of amended information in an electronic environment. The rationale for requesting the identification of the amended information lies in the fact that, while amendments may be easily identifiable in a paper-based environment due to the nature of that medium, that may not be the case in an electronic environment. Qualifiers to identification, such as “accurately” or “readily”, do not provide an objective standard while introducing an additional burden and imposing costs on system operators.

158. Thus, article 16 aims to provide evidence of and trace all amended information. The article is in line with the general obligation to preserve the integrity of the electronic transferable record contained in article 10, paragraph 2, of the Model Law. It does, however, go beyond that general obligation, as the amended information should not only be recorded, but also identified as such and therefore be recognizable.

159. Article 16 requires that a reliable method should be used to identify the amended information, but does not set out the method to be employed to identify the amendment or the amended information, as that could impose an additional burden on the management of the electronic transferable record. The reliability of the method is to be assessed according to the general reliability standard contained in article 12.

160. The words “or permits” aim at capturing those instances in which applicable substantive law allows for amendment of the electronic transferable record, but does not require it.

#### *References*

A/CN.9/761, paragraphs 45-49; A/CN.9/768, paragraphs 93-97; A/CN.9/797, paragraph 101; A/CN.9/804, paragraph 86; A/CN.9/828, paragraphs 85-90; A/CN.9/863, paragraphs 83-87.

#### *Article 17. Replacement of a transferable document or instrument with an electronic transferable record*

161. If the law recognizes the use of both transferable documents or instruments and electronic transferable records, the need for a change of medium may arise during the life cycle of those documents, instruments or records. Enabling change of medium is critical for the wider acceptance and use of electronic transferable records, especially when used across borders, given the

different levels of acceptance of electronic means and readiness for their use in different States and business communities.

162. While legal texts based on the principle of medium neutrality may recognize the possibility of change of medium, laws dealing exclusively with transferable documents or instruments are unlikely to foresee it. Articles 17 and 18 of the Model Law aim to fill that gap.

163. Articles 17 and 18 have a substantive nature and aim at satisfying two main goals: enabling change of medium without loss of the information required by substantive law; and ensuring that the replaced transferable document or instrument will not further circulate so as to prevent the coexistence of two claims to performance of the same obligation and, more generally, not to affect in any manner the rights and obligations of any party.

164. As a general rule, according to article 10, paragraph 1(a), of the Model Law an electronic transferable record should contain the information required to be contained in a transferable document or instrument (see above, paras. 89-93). However, article 17 does not require that all information contained in a transferable document or instrument should be contained in the replacing electronic transferable record. Substantive law determines the information necessary to be contained in the replacing electronic transferable record in order to preserve rights and obligations of all concerned parties.

165. Article 17 omits the reference to substantive legal notions such as “issuer”, “obligor”, “holder” and “person in control” in order to accommodate the variety of schemes used with respect to the various transferable documents or instruments, thus providing the flexibility needed to accommodate business practice.

166. Substantive law, including parties’ agreement, identifies the parties whose consent is relevant for the change of medium and the parties, if any, which need to be notified of the change.

167. Paragraph 1 requires that a reliable method should be used for the change of medium. The reliability of the method is to be assessed according to the general reliability standard contained in article 12.

168. The word “replace” in paragraph 1 does not refer to the notion of reissuance, since reissuance and change of medium are distinct concepts and article 17 is clearly meant to refer to the latter.

169. The legal consequence for non-compliance with the requirement set forth in paragraph 2 is the invalidity of the change of medium and, consequently, of the electronic transferable record.

170. Paragraph 3 sets forth that, when the change of medium has taken place, the transferable document or instrument ceases to have any effect or validity. This is necessary to avoid multiple claims for performance. The word “upon” indicates that there should be no interval between the issuance of the replacement and the termination of the replaced document or instrument. However, information contained in a transferable document or instrument may have legal value for purposes unrelated to the functions pursued with transferability. For instance, a bill of lading may provide evidence of a contract of carriage of goods. The legal status of that information is to be determined by substantive law. Moreover, article 17 does not apply in cases where a second original is deliberately issued on a medium different from that used for the first original.

171. The words “shall be made inoperative and” before the word “ceases” reflect that the transferable document or instrument cannot be further transferred after change of medium. They leave sufficient flexibility as to the choice of the method to render the transferable document or instrument inoperative.

172. If a transferable document or instrument or an electronic transferable record is invalidated on the incorrect assumption of the validity of the replacing record, document or instrument, substantive law would apply to the reissuance of the invalidated document, instrument or record, or to the issuance of the replacing record, document or instrument.

173. A transferable document or instrument or an electronic transferable record could fulfil other functions besides transferability, such as providing evidence of a contract for the carriage of goods and of receipt of the goods, or, with respect to transferable documents or instruments, providing evidence of the chain of endorsements for an action in recourse. The ability to fulfil those additional functions may continue after the document, instrument or record has been made inoperative.

174. Paragraph 3 refers to the issuance of the electronic transferable record in accordance with paragraphs 1 and 2, to clarify that the electronic transferable record has to be issued in accordance with both paragraphs.

175. Paragraph 4 is intended to clarify as a statement of law that the rights and obligations of the parties are not affected by the change of medium. In particular, the replacing record should contain all the information necessary in order not to affect those rights and obligations, regardless of the nature of that information. Though restating a general principle already contained in the Model Law, the paragraph was retained in view of its declaratory function.

*References*

A/CN.9/761, paragraphs 72-77; A/CN.9/768, paragraph 101; A/CN.9/797, paragraphs 102-103; A/CN.9/828, paragraphs 94-102; A/CN.9/834, paragraphs 53-64; A/CN.9/869, paragraphs 116-120.

*Article 18. Replacement of an electronic transferable record with a transferable document or instrument*

176. Article 18 provides for the replacement of an electronic transferable record with a transferable document or instrument. A survey of business practice indicates that such replacement is more frequent than the reverse case due to the fact that a party whose involvement was not envisaged at the time of the creation of the electronic transferable record does not wish, or is not in a position, to use electronic means.

177. Under certain national laws, a paper-based printout of an electronic record may be considered as equivalent to an electronic record. Under article 18, a printout of an electronic transferable record needs to meet the requirements of that article in order to have effect as a transferable document or instrument replacing the corresponding electronic transferable record.

178. The content of article 18 mirrors that of article 17 on the replacement of a transferable document or instrument with an electronic transferable record. Therefore, the comments in paragraphs 161-175 above also apply, *mutatis mutandis*, to article 18.

179. Article 18 does not require that all information contained in an electronic transferable record should be contained in the replacing transferable document or instrument. In particular, an electronic transferable record could contain information, for example, metadata that cannot be reproduced in a transferable document or instrument (see also above, paras. 56-58). Substantive law determines the information necessary to be contained in the replacing transferable document or instrument in order to preserve rights and obligations of all concerned parties.

*References*

A/CN.9/768, paragraph 101; A/CN.9/797, paragraphs 102-103; A/CN.9/828, paragraphs 94-102; A/CN.9/834, paragraphs 53-64; A/CN.9/869, paragraphs 121-122.

## CHAPTER IV. CROSS-BORDER RECOGNITION OF ELECTRONIC TRANSFERABLE RECORDS

### *Article 19. Non-discrimination of foreign electronic transferable records*

180. Article 19 aims at eliminating obstacles to cross-border recognition of an electronic transferable record arising exclusively from the fact that it was issued or used abroad. It does not affect private international law rules.

181. The need for an international regime to facilitate the cross-border use of electronic transferable records was already recognized at the outset of the work and reiterated throughout the deliberations on the Model Law. That need was also emphasized by the Commission at its forty-fifth session (A/67/17, para. 83).

182. However, different views were expressed on how to achieve that goal. On the one hand, there was the desire not to displace existing private international law rules and to avoid the creation of a dual regime applying a special set of conflict of laws provisions for electronic transferable records. On the other hand, there was awareness of the importance of dealing adequately with aspects relating to the international use of the Model Law for its success and expression of the desire to promote its cross-border application regardless of the number of enactments.

#### *Paragraph 1*

183. Paragraph 1 aims at eliminating obstacles to cross-border recognition of an electronic transferable record arising exclusively from the place of origin or use of the electronic transferable record. In other words, paragraph 1 aims to avoid that the place of origin or use of the electronic transferable record could be considered in itself the reason to deny legal validity or effect to an electronic transferable record. A provision similar in scope may be found in article 12, paragraph 1, of the UNCITRAL Model Law on Electronic Signatures.

184. The words “issued or used” aim at covering all events occurring during the life cycle of an electronic transferable record. In particular, they include endorsement and amendment of the electronic transferable record. In determining the location of the place of business, article 14 of the Model Law may also be relevant.

185. Paragraph 1 does not affect substantive law, including private international law. The principle of non-discrimination of electronic transferable records may not in itself constitute grounds for recognizing the legal effect,



validity or enforceability of foreign electronic transferable records. Thus, for instance, paragraph 1 could not per se lead to the recognition of an electronic transferable record issued in a jurisdiction that does not recognize the legal validity of electronic transferable records. However, paragraph 1 also does not prevent recognition in a jurisdiction enacting the Model Law of an electronic transferable record issued or used in a jurisdiction not allowing the issuance and use of electronic transferable records and that otherwise complies with the requirements of applicable substantive law.

186. The word “abroad” is used to refer to a jurisdiction other than the enacting one, including a different territorial unit in States comprising more than one.

#### *Paragraph 2*

187. Paragraph 2 reflects the understanding that the Model Law should not displace existing private international law applicable to transferable documents or instruments, which is considered substantive law for the purposes of the Model Law (see above, para. 22). The introduction of a special set of private international law provisions for electronic transferable records would lead to a dual private international law regime, which is not desirable.

188. Since paragraph 1 refers only to non-discrimination, while paragraph 2 relates to private international law, the two paragraphs operate on different levels and do not conflict with each other.

#### *References*

A/67/17, paragraph 83; A/CN.9/768, paragraph 111; A/CN.9/797, paragraph 108; A/CN.9/863, paragraphs 77-82; A/CN.9/869, paragraphs 124-131.

### **III. Other relevant issues**

#### **A. NOTION OF “ORIGINAL”**

189. Unlike other UNCITRAL texts on electronic commerce, the Model Law does not use the term “original” in the provisions that contain the requirements for establishing functional equivalence to the paper-based notion of “original”. In that respect, it should be noted that article 8 of the UNCITRAL Model Law on Electronic Commerce refers to a static notion of “original” while electronic transferable records are meant, by their very nature, to circulate. More precisely, article 8 of the UNCITRAL Model Law on Electronic Commerce refers to concepts such as “first generated in its final form”, and is

therefore particularly suitable for documents such as contracts whose modification is possible but neither necessary nor frequent. The notion of “original” in the Model Law, on the other hand, takes into account the fact that, after issuance, the electronic transferable record is necessarily subject to modifications and is not in its “final form” until presentation. Therefore, the notion of “original” in the context of electronic transferable records is different from that adopted in other UNCITRAL texts.

190. With regard to the dynamic notion of “original” in the context of electronic transferable records, article 10, paragraph 1(b)(iii), of the Model Law refers to the integrity of the electronic transferable record as one of the requirements that needs to be fulfilled in order to achieve functional equivalence with a transferable document or instrument. Hence, while the notion of “original” of transferable documents or instruments is particularly relevant for preventing multiplicity of claims, the Model Law achieves that goal with the use of the notions of “singularity” and “control” that allow identifying a specific electronic record both as the electronic transferable record that entitles the person in control to claim performance and as the electronic transferable record that is the object of control (see above, paras. 83-84).

#### *References*

A/CN.9/768, paragraphs 48-50; A/CN.9/797, paragraphs 47-60; A/CN.9/804, paragraphs 21-40.

## B. ISSUANCE OF MULTIPLE ORIGINALS

191. The possibility of issuing multiple originals of a transferable document or instrument exists in several fields of trade. The Model Law does not affect the continuation of that practice with respect to the use of electronic transferable records in accordance with article 10 of the Model Law when that practice is permitted under applicable law. Similarly, the Model Law does not prevent the possibility of issuing multiple originals on different media (e.g., one on paper and one in electronic form), where that is permitted under applicable law.

192. As noted (see above, para. 189), the Model Law does not contain a functional equivalent of the paper-based notion of “original”. Instead, the functions fulfilled by the original of a transferable document or instrument with respect to requesting performance are satisfied in an electronic environment by the notions of “singularity” and “control” (see above, paras. 83-84). Hence, the transposition of the practice of issuing multiple original transferable documents or instruments in an electronic environment requires the issuance of

multiple electronic transferable records relating to the performance of the same obligation.

193. However, caution should be exercised when issuing multiple electronic transferable records. In fact, doing so may lead to multiple claims for the same performance based on the presentation of each original. Moreover, in an electronic environment, the same functions may be pursued as with the issuance of multiple original transferable documents or instruments by selectively attributing control over one electronic transferable record to multiple entities on the basis of the legal rights attributed to each entity (e.g., title to property of goods or security interests). In practice, an electronic transferable records management system could, for instance, provide information on multiple claims having different objects relating to the same electronic transferable record.

194. If substantive law contains an obligation to indicate whether multiple originals have been issued, the electronic transferable record must comply with it in accordance with the information requirements contained in article 10, paragraph 1(a), of the Model Law.

195. Similarly, the Model Law does not specify whether one or all originals must be presented to request the performance of the obligation contained in the electronic transferable record, as this matter is determined by applicable law or, where possible, by contractual agreement.

#### *References*

A/CN.9/768, paragraphs 71-74; A/CN.9/797, paragraphs 47, 68-69; A/CN.9/804, paragraph 50; A/CN.9/834, paragraphs 47-52; A/CN.9/869, paragraphs 95-99.

### C. STORAGE AND ARCHIVING

196. The Model Law does not contain specific provisions on storage and archiving. All applicable retention requirements found in other law, including the law on privacy and data retention, should be complied with. The notions of storage and archiving may apply to the information contained in the electronic transferable record, but not to the electronic transferable record as such.

#### *Reference*

A/CN.9/834, paras. 74-75.

#### D. THIRD-PARTY SERVICE PROVIDERS

197. Depending on the model chosen, electronic transferable records management systems may require the use of services provided by third parties. The Model Law is technology neutral and therefore compatible with all models. Reference in the Model Law to electronic transferable records management systems does not imply the existence of a system administrator or other form of centralized control.

198. UNCITRAL texts on electronic commerce have sometimes dealt with the conduct of third-party service providers. In particular, articles 9 and 10 of the UNCITRAL Model Law on Electronic Signatures provide guidance on the assessment of the conduct of a third-party service provider and of the trustworthiness of its services.<sup>47</sup>

199. However, the Model Law is an enabling instrument and does not deal with regulatory matters, which should be addressed in other legislation. Moreover, expected developments in technology and business practice recommend a flexible approach when assessing the conduct of third-party service providers. Hence, the Model Law permits freedom of choice of third-party service providers, as well as of the type of services requested and of their technology.

200. In that respect, it should be noted that the general reliability standard set forth in article 12 of the Model Law, and specific standards such as the criterion to assess integrity contained in article 10, paragraph 2, of the Model Law provide parameters to assess the reliability of an electronic transferable record and of its management system. Designers of those management systems need to comply with those standards in order to establish commercially viable enterprises.

#### *Reference*

A/CN.9/834, paragraphs 78-82.

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<sup>47</sup>UNCITRAL Model Law on Electronic Signatures, *Guide to Enactment*, paras. 142-147.





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