



**UUM ILC 2017**  
**The 9th UUM International Legal Conference**

**ELECTRONIC BILLS OF LADING IN THE LIGHT OF THE  
ROTTERDAM RULES 2009**

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*Abstract*

Replacing traditional paper bills of lading with electronic bills of lading has been the trend in the area of international carriage of goods by sea. Such practice has not been regulated under the enforced International Sea Conventions namely the Hague-Visby Rules and the Hamburg Rules. The most recent attempt of the United Nations have introduced the Rotterdam Rules 2009 with the aims to bring legal modernisation, legal harmonisation and legal certainty in international carriage of goods by sea. The e-commerce practices have been recognised under the Rotterdam Rules and the provisions are considered to be the driving force for the Rules to enter into force. Since the Rules have not received sufficient number of ratifications due to various criticisms along with the private devised rules introduced by the BIMCO and the insurance cover provided by the International Group of P&I Clubs, the perception of the industry may vary accordingly and thus worth further study. This paper first gives a brief introduction about the use of electronic bills of lading followed by a comparative analysis on the Rotterdam Rules and the BIMCO's Electronic Bills of Lading Clause. The analysis will also assess the extent of any private-devised rules in influencing the position of the Rules in terms of their coverage. In the last part of this paper concludes the effectiveness of the Rules in regulating electronic bills of lading and the reasons why the industry has changed their perception towards the Rules.

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**Keywords:** E-commerce; the Rotterdam Rules 2009, International Maritime Law.



## **1. Introduction**

The development of technology and the extensive use of electronic communication have been both observed in the modern practices of the shipping industry, especially in the area of maritime communication. On the other hand, electronic commerce (e-commerce) aims to gradually replace the traditional paper documents used and exchanged in the businesses operations. The processing of the e-documents are expected to be carried out in a more convenient and timely manner.

Amongst all the extensive range of documents handled in the shipping industry, bills of lading (B/L) is of the most importance. Historical development and use of B/L have provided them three major functions: as a receipt of the goods, as a contract of carriage between the shipper and the carrier, and as a negotiable document of title (Ajaja, 2015; Ghanbari, Mohseni & Nassira, 2017). In the absence of e-commerce, B/L were issued multiple sets to prevent them being lost in the post.

After the era of e-commerce begins, electronic bills of lading (e-B/L) (Aikens, Lord & Boole, 2016, p.45-8) have been used to replace traditional B/L. However, the estimation has showed that the use of e-B/L does not keep the same pace as the use of traditional B/L since ‘only 47% of the global tanker fleet and 31% of the global bulk carrier fleet have moved to e-documentation for most, or all, of their trade and finance operations’ (Stimpson, Wood, Barthe-Dejean & Smith, 2016).

## **2. Problem Statement**

The major concern first raised by the shipping industry is whether the e-B/L can comprehensively mirror their paper equivalents, i.e. the traditional paper B/L (Ajaja, 2015; Demetriou, 2015). As a result, the shipping industry, the extensive use of e-communication does not coherent with the use of e-documentations. Even though such phenomenon can be multi-causal, the determining factors for the shipping industry to adopt e-B/L are namely the regulating rules and their applicability in this area.

Under the current international legal framework, the International Maritime Conventions, namely the International Convention for the Unification of Certain Rules of Law relating to Bills of Lading (1924) and its Visby Protocol (1968) (the Hague-Visby Rules) and the United Nations Convention on the Carriage of Goods by Sea (1978) (the Hamburg Rules) do not regulate the area of e-commerce. The only International Maritime Convention that takes e-commerce into account is the United Nations Convention on Contracts of International Carriage of Goods Wholly or Partly by Sea (the Rotterdam Rules).

The Convention is the most recent and up-to-date International Convention in regulating the area of international carriage of goods by sea. The Convention was adopted and opened for signatory in 2009. The Rules have attempted to re-balance the interests between the carrier and the shipper, and further extend their coverage to the modern development and practices in the shipping industry, with a focus on the e-commerce.

The e-commerce provisions under the Rotterdam Rules are novel when comparing with their predecessors namely the Hague-Visby Rules and the Hamburg Rules. Unlike other controversial provisions under the Rotterdam Rules, e-commerce provisions have been the most welcomed ones by the

scholars and the industry. These provisions are considered to be the major driving force for the Rules to be ratified.

However, it has been eight years since the Rules were first adopted by the United Nations, we have seen only Congo, Spain and Togo ratified the Convention and the willingness of other countries to adopt the Rules remains low. Meanwhile, various private organisations namely the BIMCO, the International Group Protection & Indemnity Clubs (the P&I Clubs) have introduced their private-devised rules/clauses to address and regulate the e-commerce activities after the adoption of the Rules. Based on the theory of transnational private governance, Schmitthoff noted that ‘the active participation of all sectors of the business community ... was a key factor in developing useful, reliable and fair set of rules capable of complementing incipient codification efforts at an international level’ (Schmitthoff, 1968, 551). The private-devised rules can therefore influence the adoption of the Rotterdam Rules in the future.

### **3. Research Questions**

The e-B/L in the light of the Rotterdam Rules and BIMCO e-B/L clause.

Based on these recent development governing the area of e-B/L, will the willingness to adopt the Rotterdam Rules be affected?

### **4. Purpose of the Study**

The first purpose of this study is to examine the relevant rules in regulating the e-documentations focuses on the B/L used in the shipping industry. Based on this purpose, this study further seeks to learn the future of the Rotterdam Rules by examining what is considered to be driving force of adopting the Rules, namely the e-commerce provisions.

### **5. Research Methods**

In order to learn the applicability of the related rules and provisions in regulating e-B/L in e-commerce, a brief comparative analysis is made between the Rotterdam Rules and the BIMCO e-B/L Clauses.

The analysis will provide us a better understanding in terms of how these rules are governing and applying in relation to the e-B/L practices. We will also have a better understanding in terms of the effectiveness of the Rotterdam Rules in regulating e-B/L and e-commerce. Based on this account, whether the provisions under the Rules can continue to be the driving force for the Rotterdam Rules to enter into force will then be subsequently concluded.

#### **5.1.Traditional B/L vs E-B/L**

Paper documents are accepted as evidence because of their durability and any changes or additions made will normally be visible. In contrast, electronic equivalents because of their nature, any changes or additions can be made immediately but they are not clearly visible. The paper and the data

communication links have been argued that they are only the media for carrying information, and thus the characteristics of electronic data interchange (EDI) (Open Text SA, 2017) should be recognised equally or superior to paper equivalents in relation to both carrier of information and the evidential functions.

Modern technology employed by the shipping industry nowadays have accelerated the carriage and largely decreased the transit time for the goods to arrive the destination port. In other words, the period of time for the bank to verify the B/L as the documentary credit prior the arrival of the goods has been largely reduced. Such delay in receiving the B/L by the consignee can further postpone the rightful release of the goods from the carrier at the destination port and result the additional demurrage cost and extra storage charges for depositories.

Thus, the major disadvantages of traditional ‘paper B/L is the causation of delays and the extremely costly undertaking of issuing multiple sets of original paper bills’ (Carsten Schaal & Lex e-Scripta, 2003; Liu & Xiao, 2013). In practice, the procedures to issue multiple sets of B/L were to prevent the B/L being lost in the post, however, they can constitute to 10-15% of the total transportation costs (Bernauw, 1995) or up to 10% of the goods value (Reed, 2011; Todd, 2013).

Replacing paper B/L with e-B/L is thus argued to be able to address the major disadvantages mentioned earlier and to avoid any stipend costs. By using e-B/L, the postal time to deliver the B/L from the carrier to the bank and to the consignee has almost been removed as they can be sent and received within seconds, leaving the only processing time to the bank for verifying the B/L. In addition, subject to the risk of cybercrime (Aikens, Lord & Bools, 2016), e-B/L are relatively safe in their delivery so issuing multiple sets are not required and do not cause any further confusion in proving the rightful owner of the B/L.

Based on this overview, it is not surprised to see the increasing use of e-B/L in the modern shipping practices. In order to understand how the e-B/L are regulated under the current legal framework, a comparative analysis between the Rotterdam Rules 2009 and the the Baltic and International Maritime Council’s (BIMCO) e-B/L clause will be made later in this paper.

## **5.2.EDI**

The commercial practice of the EDI is using computers to exchange business documents in a standard electronic format between the business partners (EDI Basics, n.d.; Open Text SA, 2017). This computer-to-computer exchange replaces the traditional exchange of documents via post or fax which can then minimise the time and error involved in manual processing procedures and consequently reduces the costs. The EDI also makes electronic form of communication more secured by having identification, error detection and correction and authentication are built into the system to add more security.

## **5.3. ANALYSIS**

The first question arises here is whether ‘a message stored in the electronic medium is sufficient to be considered as a written declaration of the intention’ (Karan, 2011, p. 231). By cross-examining the

fundamental functions between traditional and electronic documents, Karan has found that ‘the electronic record medium is a durable tangible object like the paper in a traditional document used to safely store, transfer and declare the intention ... and is nothing less than a document’ (Karan, 2011, p. 231).

The general definition of the ‘document’ is ‘an instrument on which is recorded, by means of letters, figures, or marks, matter which may be evidentially used’. In Article 1(14) of the Rotterdam Rules provides a definition of ‘transport document’ that ‘a document issued under a contract of carriage by the carrier 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’ (The Rotterdam Rules, 2009, Article 1(14)). However, the Rules ‘did not give a definition of the ‘document’ and may subsequently affect the definition of transport document depending on the object and the form of the intention therein’ (Karan, 2011, p. 231).

In addition, the concept of a document is absent from the legal regulation and thus the Rotterdam Rules have taken a slightly different approach in order to cover such gap and accommodate any future development. Berlingieri (2009) stated that these provisions were ‘drafted to allow the continuous development in electronic communication and electronic equivalent of paper documents to be applied in the future’. Instead of specifically stating the definition of e-B/L in the Rules, they alternatively innovated and used ‘electronic transport records and electronic transport documents’ in Articles 8-10 (Özdel, 2015, p. 164-5; Möllmann, 2017).

Nevertheless, such use of terminology ‘prohibits the Rules to be directly applied to other branches of the law ... and failed to respond to the needs of the commercial practice and to give general direction to the law’ (Karan, 2011, p. 231). By inventing a new terminology instead of using the existing terminology, the ‘electronic transport record’ is the declaration instead of a declaration of the intention contained in the electronic record medium.

The messages of declaration of intention has to be issued by electronic communication in order to suffice as an electronic transport record under the Rules. As we have seen under Article 2(a) of the UNCITRAL Model Law on Electronic Commerce 1996, the definition of electronic communication, the EDI, states that the electronic transfer from computer to computer of information using an agreed standard to structure the information (Aikens, Lord & Bools, 2016).

On the other hand, electronic communication is explicitly defined under Article 1(17) of the Rotterdam Rules that ‘it is information generated, sent, received or stored by electronic, optical, digital or similar means with the result that the information communicated is accessible so as to be usable for subsequent references. These two sets of definitions are different from the definition under the Rotterdam Rules and also prevent the Rules to be applied to other laws (Möllmann, 2017).

### **5.3.1. BIMCO E-B/L Clause (The BIMCO Clause)**

'In October 2015 BIMCO introduced some major revisions to the NYPE (New York Produce Exchange) Time Charter Party which includes the issuance of e-B/L covered under three sub-clauses as follows' (BIMCO Special Circular No.3, 2014; Manaadiar, 2016; Todd 2016).

(a) At the Charterers' option, bills of lading, waybills and delivery orders referred to in this Charter Party shall be issued, signed and transmitted in electronic form with the same effect as their paper equivalent.

(b) For the purpose of Sub-clause (a) the Owners shall subscribe to and use Electronic (Paperless) Trading Systems as directed by the Charterers, provided such systems are approved by the International Group of P&I Clubs. Any fees incurred in subscribing to or for using such systems shall be for the Charterers' account.

(c) The Charterers agree to hold the Owners harmless in respect of any additional liability arising from the use of the systems referred to in Sub-clause (b), to the extent that such liability does not arise from Owners' negligence.

BIMCO first recognises how the documents are generated in electronic formats, and then establish that the electronic format of B/L, waybills and delivery orders have the same effect as their paper equivalent (BIMCO Special Circular No.3, 2014, sub-section(a)) based on the conditions set in sub-clause(b). The conditions set out in sub-clause(b) is that the owner has to subscribe to an Electronic Trading System approved by the International Group of P&I Clubs.

The P&I Clubs did not recognise the carriage of cargo under all electronic trading systems. They specifically excluded liabilities in respect of the carriage of cargo under all electronic trading systems. The rationale behind was that the liabilities arises under the electronic trading system would not have arisen under a normal/traditional paper document system, i.e. the one using the transferable paper documentation (North P&I, 2010; Liu & Xiao, 2013; Kuester, 2017).

However, the P&I Clubs recognised the trend and started to review a number of electronic trading systems and agreed that liabilities arising in respect of the carriage of cargo under the P&I Clubs approved electronic trading systems would be covered by the P&I Clubs from 20 February 2010 (P&I Clubs Circular 12/15, 2015). A total of three electronic trading systems namely Bolero International Limited (Bolero, n.d.; Aikens, Lord & Bools, 2016, p.48-50), essDOCS Exchange Ltd (essDOCS, n.d.; Aikens, Lord & Bools, 2016, p.50) and the new e-title (e-title, n.d.) have been approved by the P&I Clubs.

The P&I Clubs (P&I Clubs Circular 12/15, 2015; UK P&I Clubs, 2015; e-title, n.d.) further stated their position that

In considering the use of a trading system that features e-B/L, the Clubs wish to ensure that such a system ensures performance of the three functions of a bill of lading which customarily underpin P&I cover, namely: as a receipt, as a document of title, and as a contract of carriage which incorporates the Hague or Hague-Visby Rules.

However, the Clubs do not cover the liabilities arise which are not under the traditional P&I Clubs cover (GARD, 2015).

Participation in an electronic trading system may expose them to certain liabilities which are not of a traditional P&I nature (Liu & Xiao, 2013; Kuester, 2017). These may arise through shipowners or charterers who wish to participate in either the Bolero or ESS systems being required to be party to particular contractual arrangements under which they assume obligations necessary for the system to operate. Examples of such liabilities may be for breach of confidentiality undertakings or of obligations to maintain computer links. Members should be aware that, in so far as such risks are not of a traditional P&I nature, other insurance arrangements may be required.

It is obvious that the future application of the Rotterdam Rules will simultaneously exclude the liabilities arise under the cybercrime. Thus, these liabilities and their insurance cover will be left to the parties' to source additional insurance cover as well as other regulations in this area. In terms of tis point, both private devised rules and the Rotterdam Rules share the same standing point.

## **6. Findings**

If the Rotterdam Rule do not have the consistent words and definitions as used in other regulations, the inconsistent interpretation of the word will increase the difficulty of the Rules in terms of their application. This subsequently discourages the implementation of the Rules in the absence of precedents.

In general, the clauses have been trying to provide the same functional equivalence for the e-B/L as in the paper documents (BIMCO Special Circular No. 3, 2014, BIMCO e-B/L Clause(a)). This means that e- B/L can be replaced by paper equivalents under the requests of the parties. In the case of cargoes arrive destination port before the B/L, using e-B/L can significantly reduce the number and the associated risks in letter of intent voluntarily issued by owners. Furthermore, by using the P&I Clubs approved electronic trading systems to minimise the risks of cybercrime, e-B/L can provide more convenience and advantages in the modern shipping operations.

In relation to the e-commerce provisions under the Rotterdam Rules, they have various new definitions which are different from other related regulations. Thus, it is very difficult to learn the Rules' future application in the absence of legal precedent, especially the Rules' definitions are different from the existing regulations.

## **7. Conclusion**

There is no doubt that the modern practices of using e-B/L and e-commerce become a phenomenon in the shipping industry. It is foreseeable that they will completely replace the traditional paper trading documents and systems we have been using.

The Rotterdam Rules clearly foresee these trends and took them into account during the stage of their drafting. Even though the e-commerce provisions have been the most welcomed provisions since the

Rules were first adopted, they do not constitute the core provisions in the Rules and thus they do not have such a strong positive influence than other provisions in the Rules. Since the e-commerce provisions are the only positive driving factors for the Rules to be adopted, the uncertainty in terms of the Rules' future application and the high costs of implementation are considered to be the key elements which can seriously hinder the future adoption of the Rules.

Based on the controversial criticisms put forward by the scholars and the shipping industry, the major obstacle for the Rules to enter into force is their aim to re-balance the interests between the carrier and the shipper. In the absence of legal precedents, it is very difficult to predict the outcome of the cases under the Rules.

On the other hand, the private driving force in regulating the area of e-commerce has had a great improvement and provided coverage by offering the workable and approved platforms for e-commerce. They have also drawn the uniform definitions which can be applied to other regulations. Private entities are more willing to participate and adopt these voluntary rules for their business practices because of the advantages of lower drafting and implantation costs. The lower entry costs to adopt the private rules can promote the private businesses to voluntarily adopt them into their business practices.

The Rotterdam Rules will have more obstacles to overcome, i.e. the compatibility between the private rules and the Convention itself. Especially when the international community remains relatively reluctant to adopt the Rules at this stage, it is more likely that the private businesses will turn to private devised rules to seek an immediate solution to govern their current practices with a lower cost.

One thing we have to bear in mind is that the major concern of the shipping industry has raised in relation to whether the e-B/L can comprehensively mirror their paper documents equivalents. There are various characteristics possess under the traditional B/L, which the parties will have to sign up with the approved electronic trading systems in order to have their electronic equivalents to enjoy the same benefits.

Therefore, it is obvious to see that the introduction of e-B/L may face more difficulties in the future to completely replace their paper equivalents. Even if the use of e-B/L continues to thrive, the shipping industry may not be willing to adopt the Rules to cover all of their business operations based on their high implementation costs, and they may be directed to private rules for an immediate solution.

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