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## **The Electronic Bill of Exchange Concept from an International Perspective**

**Abstract:** The aim of the article is to examine the structures of electronic bills of exchange. It also includes an analysis of the proposed shape of an electronic bill of exchange prepared for the needs of the Polish legal system by the Working Group for distributed registers and blockchain, operating at the Ministry of Digitalization. The comparative and dogmatic methods were used for the analysis. According to the hypothesis put forward by the author, the introduction of the construction of an electronic bill of exchange to the Polish and foreign legal systems is necessary to maintain the functioning and importance of bills of exchange among securities that are traded in the economy. However, the implementation of an electronic promissory note requires appropriate legislative changes, as the current legal status does not allow for an unambiguous statement of the possibility of issuing them.

**Key words:** bill of exchange, Blockchain, electronic value papers

### **Introduction**

Bills of exchange have been used in business since the 13th century<sup>1</sup>. In Poland, this matter was regulated in the Act of April 28, 1936, – Bill of Exchange Law<sup>2</sup>. It should also be emphasized that the content of the Bill of Exchange Law is the result of Poland's fulfilment of international obligations resulting from Poland's accession

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1 J. Łaski and others, *Weksle elektroniczne w technologii blockchain*, Warsaw 2019, p. 2, <https://www.gov.pl/web/cyfryzacja/blockchain> (7.11.2021).

2 Act of April 28, 1936 – Bill of Exchange Law (unit text Journal of Laws of 2016, item 160).

to the Geneva Convention<sup>3</sup>. One of the basic features of a bill of exchange obligation is scriptability. It consists in the fact that the bill of exchange is a security on a money order and, most importantly, it must be made in writing<sup>4</sup>. Thus, bills of exchange can only be in documentary form and must contain the handwritten signature of the issuer. Along with the progressive dematerialization of securities, which has already been covered by, *inter alia*, stocks and bonds, documentary form began to stand in the way of maintaining the current status of the bill of exchange as one of the most commonly used securities in economic trading. The implementation of the concept of an electronic bill of exchange into the legal systems, including the Polish legal system, could turn out to be helpful in this matter.

## 1. Construction of an Electronic Bill of Exchange in Foreign Legal Systems

The concept of an electronic bill of exchange has been considered in many jurisdictions around the world. This topic troubled representatives of the world of science, including in the UK<sup>5</sup>, Italy<sup>6</sup>, Romania<sup>7</sup>, Iran<sup>8</sup>, Iraq, and Egypt<sup>9</sup>. It is worth noting, that, so far, comprehensive regulation relating to electronic bills of exchange has only been introduced to the Japanese legal system<sup>10</sup>.

The above-mentioned regulations are based on the following assumptions. First, it should be pointed out that Japanese legislation provides for the registration of every claim based on the construction of an electronic bill of exchange. Moreover, as the name of this instrument indicates, all records of claims are made in electronic form. Moreover, in order to ensure the stability of the electronic bill of exchange issuing system, a special trading company was established to keep the register – the

3 Convention providing a uniform law for bills of exchange and promissory notes (Journal of Laws of 1937 No 26, item 175).

4 R. Woźniak, *Wprowadzenie do prawa papierów wartościowych*, Warsaw 2019, p. 55.

5 L. Gamertsfelder, *Electronic Bills of Exchange: Will the Current Law Recognise Them?*, "University of New South Wales Law Journal" 1998, vol. 21 no. 2, pp. 566–577.

6 A. Ponza, S. Scannapieco, A. Simone, C. Tomazzoli, *Envisioning the Digital Transformation of Financial Documents: A Blockchain-Based Bill of Exchange*, in: J. Prieto, A. Pinto, A. Das, S. Ferretti (eds.), *Blockchain and Applications*, Basingstoke 2020, pp. 81–90.

7 S.L. Cristea, *From the Format Paper Bill of Exchange to the Electronic Bill of Exchange. Credit Title or Payment Instrument?*, "Analele Stiintifice Ale Universitatii Al. I. Cuza" 2017, vol. LXIII, no. II, pp. 155–172.

8 M. Sardoeinasab, A. Taheri, *A Study of Legal Rules Applicable to Electronic bill of exchange*, "Islamic Law Research Journal" 2014, vol. 15 no. 39, pp. 59–90.

9 M.M.K. Al-Ibrahimi, *The concept of electronic trading bill of exchange (comparative study)*, "Risalat al-huquq Journal" 2017, vol. 9 no. 2, pp. 501–525.

10 *Electronically Recorded Monetary Claims Act of June 27, 2007, Act No. 102*, <http://www.japaneselawtranslation.go.jp/law/detail/?id=2043&vm=2&re=02> (19.07.2021).

Electronic Monetary Claim Recording Institution. The company is under the control of state authorities. The regulation issued to the above-mentioned act regulates in detail the technical requirements for keeping the register and storing the collected data. The register records all activities undertaken in connection with the issuing and trading of electronic bills of exchange. The register also contains data of authorized and obligated persons from issued electronic bills of exchange, amounts of liabilities, and their payment dates. These data include, at least, the names and surnames of these persons, and their addresses. It is also important that entries in the register are made at the request of interested persons. However, it should be emphasized, that the entities supervising the register are obliged to verify the correctness and validity of the data submitted for entering. In the event of irregularities being found, these persons have the power to refuse the entry. Registry operators are also required to supervise the order in which entries are made when more than one application relating to the same claim is submitted. In the event of failure to exercise due diligence by the persons entering the register, the institution which keeps the register is obliged to compensate for the damage caused by making an incorrect entry in the register.

It should also be noted, that legal regulations in Japan also provide for appropriate mechanisms for the transfer of rights resulting from issued electronic bills of exchange. This can be done using a special assignment procedure, which is also done using an electronic protocol. The provisions of the law regulated by the Electronically Recorded Monetary Claims Act also protect the interests of the heirs of persons entitled to an electronic bill of exchange. For this circumstance, a detailed regulation was provided for the rules governing the entry into the right of the rightsholder by persons who acquired an inheritance thereafter. In this context, it is also important that any subjective and objective changes in the scope of claims arising from a specific electronic bill of exchange are effective only if they are recorded by authorized persons in the register. Making changes in any other form has no legal effect.

In addition to the mechanisms related to the transfer of rights from electronic bills of exchange, the regulations also provide for the possibility of surety by third parties for liabilities under bills of exchange. For this purpose, also using a special electronic protocol, it is possible to appoint a guarantor. The guarantor entered in the register shall be liable for the payment of receivables to the same extent as the person who issued the electronic bill of exchange. It is also possible to establish a pledge on receivables resulting from an electronic bill of exchange.

It is also worth noting that the regulations in Japan provide for a three-year limitation period for claims arising from electronic promissory notes. The provisions of the law are restrictive in this respect, as after this period the rights from electronic bills of exchange expire.

To make the assessment of legal regulations in Japan, it should be noted that the solutions applied in this legislation are very interesting. The mechanisms in the

field of issuing and trading in documentary bills of exchange have been successfully transferred to the electronic sphere. An important element of Japanese regulation is that a state institution oversees the functioning of the entire electronic bills of exchange market. This allows for the stability of the market and the safety of its participants. The main disadvantage of the solutions applied in Japan is that all transactions must be registered through the institution keeping the register. This means that for the emergence of rights and obligations arising from electronic bills of exchange, it is necessary to make an electronic entry in the register. The participants of economic transactions are not able to effectively create electronic bills of exchange on their own. This significantly limits the efficiency of issuing and trading electronic bills of exchange. Summing up, it should be pointed out that the legal regulations concerning electronic bills of exchange in Japan, at the time of their introduction to the legal system, were innovative and unique on a global scale. However, from the current perspective, they are not so attractive. They do not provide for the use of the latest technologies that enable more efficient creation and trading of electronic bills of exchange. Modern technologies allow for greater participation in these processes by the participants of economic transactions themselves and for reducing the participation of state authorities in them.

## **2. Concepts for Implementing an Electronic Bill of Exchange into the Polish Legal System**

The concept of implementing bills of exchange in an electronic, dematerialized form has already been presented in Polish legal literature. A study in this area appeared, for the first time, several years ago<sup>11</sup>. One of the basic problems reported in the literature was the issue of creating a secure IT infrastructure that allows for issuing bills of exchange in electronic form. It was considered, for example, how to solve the problem of distinguishing the original document from its copy in the case of creating duplicates of the file, in which the bill of exchange was saved<sup>12</sup>. The lack of such a possibility creates the risk of multiplying the liability resulting from the issued bill of exchange. The doctrine suggested the creation of a closed system of issuing and trading electronic bills of exchange as a remedy in this case. On the one hand, this was to prevent the copying of bills of exchange, and on the other, to enable the change of the person entitled to the rights incorporated in them<sup>13</sup>. Initially, it was

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11 G. Wierzbiński, S. Kotecka, *Koncepcja elektronicznego weksla własnego w obrocie gospodarczym, „E-biuletyn Centrum Badań Problemów Prawnych i Ekonomicznych Komunikacji Elektronicznej”*, Wrocław 2009.

12 *Ibidem*, p. 4.

13 F. Zoll, *Klauzule dokumentowe. Prawo dokumentów dłużnych ze szczególnym uwzględnieniem papierów wartościowych*, Warsaw 2004, pp. 35–36.

proposed to base the system of electronic bills of exchange on IT infrastructures of commercial banks. Each bank that would implement the system would be able to offer its clients electronic bill of exchange trading services<sup>14</sup>. The main disadvantage of the presented concept of an electronic bill of exchange was, that the participants of business transactions could only issue bills of exchange. Furthermore, it did not provide for the possibility of issuing some types of bills of exchange. Moreover, this concept was very general and did not provide for specific solutions of a technical nature. Consequently, it did not find a very broad response.

A real revolution in the field of trading in electronic material goods was brought about by the creation of the first cryptocurrency – Bitcoin. Trading in this digital currency was based on an extremely innovative Blockchain system. Using Blockchain technology, it is possible to create a distributed ledger, the so-called transaction book. It stores information that the users of a given group have access to. All new activities (entries or changes) are recorded in it by a predefined network protocol<sup>15</sup>. Due to the fact that all transactional activities are performed in one place, it is possible to recreate the sequence of events and reach the original content of the document. Thus, the use of Blockchain technology allows the elimination of the basic problem that has been tried for years as part of the consideration of the concept of an electronic bill of exchange.

Based on the use of Blockchain technology, the Working Group for distributed registers and Blockchain operating at the Ministry of Digitization developed a concept for the implementation of electronic bills of exchange into the economic market, including legal and technical solutions<sup>16</sup>. In this article only the legal aspects of implementation of electronic bills of exchange to the Polish legal system will be analysed.

One must agree, that the basic argument in favour of recognizing the admissibility of issuing electronic bills of exchange in the realities of the Polish legal system is that in Polish law the concept of a document also includes electronic documents<sup>17</sup>. According to Article 77<sup>3</sup> of the Polish Civil Code, a document is an information carrier that makes it possible to read its content<sup>18</sup>. However, as stated in art. 77<sup>2</sup> of the Polish Civil Code, to maintain the documentary form of a legal transaction, it is sufficient to submit a declaration of will in the form of a document in a manner enabling the identification of the person submitting the declaration. Therefore, there should be no doubt that a document that is issued in the form of an

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14 G. Wierzbicki, S. Kotecka, *Koncepcja elektronicznego weksla własnego w obrocie gospodarczym*, „E-biuletyn Centrum Badań Problemów Prawnych i Ekonomicznych Komunikacji Elektronicznej”, Wrocław 2009, p. 8.

15 J. Łaski and others, *Weksle elektroniczne w technologii blockchain*, Warsaw 2019, p. 2.

16 *Ibidem*.

17 *Ibidem*, p 10.

18 Act of 23 April 1964 – Civil Code (uniform text Journal of Laws 2020, item 1740, as amended).

electronic record and allows the identification of the person who signed it may have legal effects. Thus, in the light of the provisions of the Polish Civil Code, there are no obstacles to implement the construction of an electronic bill of exchange into the Polish legal system.

However, this does not mean that in the current legal situation it is allowed to issue electronic bill of exchange in Poland. The regulations provided for in the Act of April 28, 1936, – Bill of Exchange Law should also be taken into account. It has been indicated in the literature that the meaning of art. 1 of the Bill of Exchange Law leaves no doubt, that with regard to the issuance of a bill of exchange, the act requires a written form<sup>19</sup>. Moreover, in the current legal state the signature of the promissory note issuer must be handwritten, which results from the essence of the signature and the lack of regulation providing for the possibility of its mechanical reconstruction<sup>20</sup>. Already at this point it should be noted that rethinking the above-mentioned view should trigger the introduction of the EU Regulation eIDAS<sup>21</sup> and the possibility of making qualified signatures. In the new reality, they could meet the requirement of signing a promissory note in the electronic environment, which at the same time would be unique in the blockchain technology. Another argument in favour of the impossibility of issuing electronic bills of exchange is the fact that the legislator differentiates between the pages of a document on which appropriate annotations are made<sup>22</sup>. An example of such a regulation is, inter alia, art. 13. sec. 2, according to which, the endorsement is valid only if it was written on the reverse side of the bill of exchange or on an extension. Another example is the content of art. 25 sec. 1 sentence 3, of the bill of exchange law, which indicates that the signature of the drawee on the front side of the bill of exchange means acceptance. Another regulation in this respect is art. 31 sec. 3, which states that the signature on the front side of the bill of exchange shall be deemed to be a surety. The last example is art. 88 sec. 1, according to which, the protest should be written on the reverse side of the bill of exchange or on a separate card combined with the bill of exchange. The examples indicated above, prove that the intention of the legislator was that the bill of exchange be issued in a document (paper) form. The last barrier preventing the issuance of bills of exchange in electronic form in the current legal status are the rules for the transfer of rights from them, which provide for the transfer of possession of the document on which the bill of exchange was written<sup>23</sup>. In the author's opinion, all the above-mentioned

19 J. Jastrzębski, M. Kaliński, Komentarz do ustawy – Prawo wekslowe, (in:) J. Jastrzębski, M. Kaliński, Prawo wekslowe i czekowe. Komentarz, commentary on art. 1, thesis 3, SIP LEX 2014.

20 *Ibidem*.

21 Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC, Official Journal of the European Union No L 257/73.

22 J. Łaski and others, *Ibidem*, pp. 10–11.

23 *Ibidem*, p. 11.

arguments support the assumption that issuing electronic promissory notes in Poland will be possible only after introducing the necessary legislative changes.

Due to the necessity of a comprehensive remodelling of the rules of issuing and trading in bills of exchange, it would be advisable to implement the rewritten act on bills of exchange into the Polish legal system. It is noteworthy that the implementation of this postulate is not possible at the moment, because changing the content of the Bill of Exchange Law would first require a change to the Geneva Convention. Apart from the above-mentioned difficulties in implementing the postulate of amending the bill of exchange law, the changes introduced to the act could also improve the legibility of the act. The current law was passed in 1936, and the language in which it was written is not adapted to the present reality. Moreover, in the light of the generally progressing dematerialisation of securities, it would be worth considering the withdrawal from the documentary version of bills of exchange. The Polish legislator has taken the same step recently in relation to bonds and shares. Preparation of relevant transitional provisions under the new act would allow for securing the interests of the current participants of trading on the bills of exchange market. On the other hand, it would allow a gradual transition to a new stage, in which bills of exchange would be available only in electronic form.

As regards detailed solutions, it would be advisable to maintain the existing legal solutions regulating the principles of trading in bills of exchange in Poland. Regulations concerning bills of exchange, such as the content of a bill of exchange, the principles of transferring rights resulting from them, the principles of guaranteeing bills of exchange, as well as the rules of payment of receivables resulting from them, have been working for almost a hundred years. It would only be necessary to adapt them to the needs and possibilities of the electronic space. In this regard, the solutions proposed by the Working Group on distributed ledgers and Blockchain should be welcomed<sup>24</sup>. Basing the technological infrastructure on the distributed ledger system seems to be the most modern and, at the same time, the safest possible solution. Referring to the idea<sup>25</sup> basing the law on UNCITRAL Model Law on Electronic Transferable Records<sup>26</sup> it must be pointed out that this is, in principle, the right direction. However, the concept of the authors of the report, according to which legal regulations introducing the construction of electronic bills of exchange would allow the freedom to choose the technology on the basis of which it would be possible to issue them, should be criticized. This could lead to destabilization of this market and failure to guarantee an adequate level of security for its participants. It is particularly important to regulate this issue in the case of promissory notes, as the obligations

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24 J. Łaski and others, *Ibidem*, pp. 14–33.

25 *Ibidem*, p. 34.

26 UNCITRAL Model Law on Electronic Transferable Records, [https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/mletr\\_ebook\\_e.pdf](https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/mletr_ebook_e.pdf) (19.07.2021).

arising from promissory notes are abstract in nature. Thus, a promissory note may be the only evidence of a liability. Therefore, it seems necessary to precisely regulate the conditions in which such obligations may be created. It seems more justified to clarify all technical issues in subordinate acts, i.e., regulations. It would allow for the establishment of clear and stable rules for issuing and trading electronic bills of exchange. However, a barrier in this respect may be the specificity of Blockchain's functioning as a decentralized network and variable by definition. In this context, it also seems justified to leave control over the promissory note trading system to the state. The Blockchain technology ensures the proper functioning of the system based on the actions of the participants of electronic bill trading themselves. However, public authorities should have specific control instruments that would allow for the elimination of abuses in this area. It should be emphasized that for the reasons indicated above (decentralization of the Blockchain system), these two goods (the benefits of using Blockchain technology and the control of this system by public authorities) unfortunately contradict each other. Therefore, basing the system of issuing electronic bills on the Blockchain technology, unfortunately the state authorities will be deprived of any control over this system.

## Conclusion

Summing up, it should be noted that the concept of electronic bills of exchange is widespread all over the world. Unfortunately, it has so far been the subject of considerations of representatives of science and is not reflected in the legislation of individual countries. In view of the progressive dematerialisation of securities, this situation causes a decline in the importance of bills of exchange in trading.

A pioneering legal regulation in this area was introduced by Japan. The solutions applied in Japanese legislation are very interesting and are based on classic concepts of bill trading, and at the same time have been adapted to the needs of the electronic environment. As already indicated above, the biggest disadvantage of the solutions applied in Japan is the too extensive role of the entities remaining under state control. Trading in electronic bills of exchange depends on entries made by these entities in the relevant register. This solution, in the face of technological progress, ceased to be exemplary and worth following.

With regard to the Polish legal system, it should be noted that in the current legal state, the issuance of electronic promissory notes raises serious doubts. The provisions of the bills of exchange law stand in the way, forcing the bills of exchange to function only in the documentary form. Therefore, in order to introduce electronic bills of exchange to trading in Poland, it is recommended to prepare a completely new, comprehensive act. It seems reasonable to completely dematerialize bills of exchange and base their issuance and trading on the structure of dispersed registers. Following



the example of Japanese regulations, it should be considered to grant certain control powers over the system to public authorities. However, it should be emphasized, that these powers should be limited only to the supervision of the proper functioning of the system. On the other hand, the activities related to the issuance of promissory notes and trading in them should be performed autonomously by the participants of such trading. Finally, it should also be pointed out that in the face of the progressive dematerialisation of securities, implementation of the concept of electronic bills of exchange into the Polish legal system is a necessary step for this sector of the financial market.

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