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LEGAL EFFECT AND ENFORCEABILITY OF A SMART CONTRACT UNDER ESTONIAN LAW

IT Law Lab research paper

Tartu
2018
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INTRODUCTION

Smart contract was first introduced by Nick Szabo already in 1993. A general understanding since then has been that a smart contract is a phenomena which allows verifying and executing obligations through self-enforced computer code.\(^1\) Thus, the obligations between the parties of the contract are embedded in the software code.\(^2\) Thereupon blockchain is used to run the code. Once the code has been initiated, it will always execute in the way the code was written and no one can interfere its operation.\(^3\) This makes smart contracts self-executable.

Before getting any deeper into the subject of this paper, the terminology behind the notion of a “smart contract” must be determined in the context of this paper since this term is widely used in different contexts which creates a lot of confusion. Sometimes this notion is used to represent a simple transaction carried out on blockchain.\(^4\) The word “contract” in that sense indicates that a computer program fulfils certain predefined obligations and may take control of certain assets within the shared ledger. However, it may not necessarily be linked to a formal legal agreement and it only enforces the actions set out in the code.\(^5\) The example of such use of a smart contract would be A selling a movie ticket to B for 1 Ethereum (hereinafter ETH). In legal literature, this type of definition has also been named as “smart contract code”.\(^6\)

In other cases, the term “smart contract” indicates to a legal contract which is partially expressed in a computer code\(^7\) - then the blockchain technology is used to complement existing legal contracts.\(^8\) Usually the terms of a contract which are implemented into a code are the executable parts of the contract.\(^9\) An example would be a case where consumer X has concluded a travel insurance contract with insurance company Y. In that case there are certain parts of such contract which are self-executable. For example, if the parties agreed that a certain amount of money will be paid by B to A in case a flight delays at least three hours,
such distribution of compensation could be automated. Then the event triggering a pay-out is relatively objective and thus it could be verified rather reliably by oracles\textsuperscript{10, 11} In literature, such smart contract has been named as a “smart legal contract”.\textsuperscript{12}

In certain chapters of this paper it will be necessary to distinguish between these two types of smart contracts and therefore the authors will also use the notions “smart code contract” and “smart legal contract”. However, where such differentiation is not necessary, a common notion “smart contract” is used.\textsuperscript{13}

It has been explained in the literature that the advantages of a smart contract are considered to be related to the speed of their potential execution, the transaction costs (as for example there are less costs), the finality of their execution and the reliance upon its execution as the automation of execution of the contract establishes trust between the parties to the contract.\textsuperscript{14}

However, at the same time there is a considerable legal uncertainty surrounding the application of a smart contract as the legal effect and enforceability of the latter has remained somewhat unclear. The purpose of this paper is to clarify these issues and determine the legal effect and enforceability of smart contracts under Estonian law.

The subject of legal effect and enforceability of smart contracts under Estonian law is definitely a relevant topic. Several foreign authors have been discussing the legal essence of a smart contract and have asserted that this matter is not clear-cut and needs further analysis. Moreover, the analysis of legal effect and enforceability of smart contracts from the viewpoint of Estonian law is pertinent as there is no such comprehensive research.

The problems solved in this paper are structured into three main chapters. The first chapter will mainly focus on discussing the question whether a smart contract can be considered as a binding legal contract under Estonian law. Thus, it will be elaborated whether the key elements of a legal contract are to be witnessed when a smart contract is concluded. Also,
different requirements for a legally binding contract depending on its specific type are discussed in the light of a smart contract. In the second chapter the peculiarities of contractual terms of a smart contract are analysed and further, the interpretation of a contractual code is examined. The third chapter will mainly focus on resolving smart contract related disputes. As regards of that, it will be elaborated what could be the dispute resolution mechanisms for a smart contract and also whether it would be possible to use smart contract as an evidence in civil court proceeding. Moreover, the jurisdiction over a smart contract related dispute is analysed and the question on the identity of the defendant in a court proceeding is discussed.

All chapters of this paper were written by using systematic and analytical methods. Throughout this paper many foreign authors’ research papers, articles and books were used which describe the legal peculiarities of a smart contract. Although the laws in various jurisdictions differ, the main principles of contract law are roughly similar, therefore making the use of such literature appropriate. Furthermore, different writings were used for describing the technical background of a smart contract. Also, a selection of legal reviews, books and commented publications of laws were operated for interpreting Estonian legal acts.
1. SMART CONTRACT AS A BINDING CONTRACT UNDER ESTONIAN LAW

1.1. The key elements of a binding legal contract

For determining whether a smart contract can be regarded as a legal contract under Estonian law, the key elements of establishing a contractual relationship must be assessed in the light of concluding a smart contract. Therefore, it cannot be stated that a smart contract is a legal contract merely because the notion contains a word “contract”, but instead, its legal status needs to be analysed.

There is a number of publications which have discussed the legal validity of a smart contract under English law. It has been found that the following elements are necessary for establishing a contractual relationship: (i) one of the contracting parties must make an offer to contract and the other(s) must accept that offer; (ii) there must be consideration\(^{15}\) for the offer; (iii) the parties must have an intention to form legal relations; (iv) there must be certainty as to terms of the contract.\(^{16}\)

The authors of this paper are of the opinion that under Estonian law the first condition of exchange of offer and acceptance must be established (Law of Obligations Act\(^{17}\) § 9 (1), hereinafter LOA) while the latter provision also provides that the offer and acceptance must be clear enough for the terms of the contract to be certain. Furthermore, the third condition must also be witnessed as parties must have intention to form legal relations (LOA § 8 (1)). However, regarding the second condition, it can be said that under Estonian law it is not necessary to establish “consideration” for a contract to be legally valid. Such requirement cannot be derived from any provisions of LOA (nor General Part of the Civil Code Act\(^{18}\), hereinafter GPCCA) and it has also been affirmed in legal literature that “consideration” is not necessarily needed if a contract is concluded under Estonian law\(^{19}\).

Deriving from the aforementioned, it will be discussed whether in case of concluding a smart contract, firstly, offer and acceptance are exchanged according to LOA § 9 (1); and secondly, do parties have intention to form legal relations in the meaning of LOA § 8 (1).

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\(^{15}\) To briefly explain what is meant under “consideration”, it is derived from a principle by which each party of a contract must receive a benefit and each suffer a detriment. The benefit or detriment in such case is referred as “consideration”. Therefore, “consideration” means that each party must receive a benefit and suffer some kind of detriment. - E-Law Resources. Available at: http://e-lawresources.co.uk/Consideration.php (12.01.2018).


\(^{18}\) General Part of the Civil Code Act - RT I, 12.03.2015, 107.

1.1.1. Exchanging the declarations of intent

As already stated, according to LOA § 9 (1), for a contract to be established between the parties, an offer has to be made by one party and accepted by the other party (parties) or another kind of sufficiently clear mutual exchange of declarations of intent must take place. As a general rule, the content of such declarations is regarded clear enough if it contains obligations which a court could enforce to be executed in a compulsive manner.\(^{20}\)

The authors of this paper hereby point out that the assessment of the exchange of declarations of intent would possibly differ in regard of a smart legal contract and a smart code contract. In the first case, as already explained in the introduction, in addition to the code there is also a traditional form of contract including the terms which cannot be executed in automated way. Therefore, it would be reasonable to assume that there is sufficient exchange of intentions not via blockchain (as it is in the case of smart code contracts - see below) but by another more traditional manner. For example, if parties were to conclude an insurance contract, the terms of the contract would probably be uploaded to the insurer’s website, constituting *invitatio ad offerendum*. Then the consumer would get acquainted with them and make an offer via email or communication platform provided on the webpage, which could be thereupon accepted by the insurer. Thus, there would be clear exchange of intent between the parties and specific problems in that matter would likely not arise.

The establishment of offer and acceptance can be more challenging in the case of a smart code contract. The answer to the question, whether it is even possible to sufficiently detect exchange of offer and acceptance, diverge greatly between different scholars. Some of them are of the opinion that a clear offer and acceptance can be witnessed when smart code contract is established. Namely, it has been pointed out that if a code is posted to blockchain by one user to carry out a transaction, it constitutes as an offer. When the code is executed by another party, it is an acceptance, thus acceptance comes through performance.\(^{21}\) For example, if one party would upload a code to blockchain by which the latter wishes to sell its movie ticket for 1 ETH\(^ {22}\), such action would constitute as an offer. If thereupon another person would execute this code by ceding the control over his 1 ETH to blockchain, this would be an acceptance. Moreover, it has been pointed out in literature, that even if a party


\(^{22}\) Taking into account the price of bitcoin today (12.01.2018), which is about 1 ETH = 1000 €, it would one really expensive movie ticket. However, for the purpose of a simple example, let us use it.
uses an electronic agent for concluding a contract a will of that party is established as this individual has decided to use such an agent for conclusion of certain agreements and has agreed to be bound by their actions. An example for this case would be an offer to buy shares of an entity and acceptance by electronic agent would be only given if certain preconditions (given to the latter by an individual) are met, e.g. a price per share is under 1 ETH.

At the same time, there has been doubt and even statement in literature that no offer and acceptance can be established in case of smart code contract. However, no explicit or further explanation has been given why such declarations of intent could not be witnessed.

The authors of this paper tend to support the standpoint that in the case of a smart code contract it is possible to establish enough clear declarations of intent. Posting a code to the blockchain can indeed be interpreted as an offer, especially taking into consideration that the content of such offer is absolutely clear as the code in essence must be clear enough for it to be self-executed by the computer. Moreover, the fact that the acceptance of such offer is established via execution of the contract, i.e. by an action, is allowed according to Estonian law. Namely, it derives from the second sentence of LOA § 9 (2) that it is also possible to express acceptance by action. Therefore, it can be argued that in case of a smart code contract offer and acceptance can be clearly witnessed. Thus, it can be concluded that in both cases - a smart legal contract and a smart code contract - in essence a smart contract can be legally binding according to Estonian law.

1.1.2. Parties’ intent to create legal relations

It is a general principle of contract law theory that when analysing any potentially contractual relationship, it must be established whether the intent of the parties of the agreement was to create legal relations. It has also been clarified in legal literature that the same principle applies in Estonian law according to LOA § 8 (1). The main purpose of this rule is to distinguish contractual relationships from agreements made on the basis of courtesy and not to give legal meaning to the latter.

The authors of this paper are of the opinion that in the case of a smart legal contract there should generally be no doubt whether the parties had intent to create legal relations as, in
addition to the code itself, there is also a traditional contract governing the relations of the parties. Therefore, it would be more or less evident that parties indeed had intent to create legal relations between each other.

However, doubt has been raised in literature whether in case of a smart code contract an intent of parties to create legal relations can be witnessed. This is because only a transaction is being made in case of smart code contract and then it is arguable whether legal obligations between parties are established. Moreover, it has been expressed in literature that some IT professionals tend to believe that smart code contracts are jurisdiction-free arrangements as their execution is automated and thus there is no intent to create legal relations. Regarding the latter, it has also been pointed out that as a smart contract is self-executable, it leaves no discretion to debtor to perform it or not. Thus, there cannot be an obligation in the legal sense to perform it as there can be no liability for breach since the contract cannot be breached.

At the same time, it has been pointed out that a smart code contract is generally used to govern the same relations which are governed by traditional contracts - e.g. for a transfer of ownership over a certain asset. Therefore, smart contracts usually do not fall into a class of agreements where legal contracts are not normally made - e.g. a promise out of courtesy to wash the dishes. Moreover, it has been argued in literature that even if a mere transaction is made by a smart code contract (e.g. one sends 1 ETH to another), still, anyone would probably not initiate such transaction without a reason. Thus, there would be some kind of legal obligation to do it besides the smart code contract (and thus such transaction would be part of smart legal contract).

The authors of this paper agree with the latter standpoint. From logical standpoint it would not make sense to use blockchain for promises out of courtesy. Rather, it is used for genuine fulfilment of obligations, for example sending Ethereums, which is not executed for no particular reason. For example, if one party sells to another a movie ticket by a smart code contract and another pays 1 ETH for it, both of these transaction are clearly executed due to the legal obligation. Moreover, the fact that in case law it has been established that cryptocurrency in essence can be used for fulfilling obligations, indicates, that such a smart code contract (as well as a smart legal contract where cryptocurrency is used) is used for fulfilling legal obligations.

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29 Linklaters, p 6.
31 A. Savelyev, p 17.
32 Ibid, p 11.
33 Linklaters, p 6.
34 In this particular case bitcoin was discussed - Supreme Court of Estonia 11.04.2016 decision no 3-3-1-75-15, p 17.
Regarding the argument which states that “there is no legal obligation because there is no room to breach this obligations if it is self-executed”, the authors find that such position does not take into account the fact that actually smart contracts can be breached\textsuperscript{35}. Therefore, in such case the debtor could be liable for a breach. Such conclusion makes reasonable sense since if it would be determined that the breached obligation was not a legal obligation, the aggrieved party could not use legal remedies which means that the latter would not have access to justice. Such situation would be in contradiction with the first sentence of § 15 of the Constitution of the Republic of Estonia\textsuperscript{36} which grants access to justice as a fundamental right for everyone whose rights and freedoms have been violated.

Thus, it can be concluded, that in case of smart code contract, as well as smart legal contract, parties do have intent to establish legal relations.

1.2. Requirements for a legally binding contract from different types of contract

There is also a number of conditions which a legal contract must comply with depending on its type, e.g. whether it is a sales contract for an immovable or a sales contract involving a consumer. As follows, the most common of such conditions will be pointed out and it will be discussed whether a smart contract could be held as legally valid in the light of such provisions.

1.2.1. Format of a contract

In general, as stated in LOA § 11 (1), a contract may be entered into orally, in writing or in any other form if no required format is provided by law. Therefore, generally the parties of a contract can themselves choose in which form they want to conclude the contract.\textsuperscript{37} However, depending on the type of the contract, the law may dictate it to be concluded only in a certain format. In regards of that, it must be established what is the format of a smart contract.

The authors of this paper are of the opinion that a smart contract can be regarded to be a format which can be reproduced in writing in the sense of GPCCA § 79. The essence of a contract in such format is that it is not categorized as a written contract, i.e. it does not have signatures of the parties. However, unlike a contract concluded orally, the content of the contract is also available later on and not only on the moment of concluding the contract.\textsuperscript{38} This is because in the case of smart contracts the code is entered into blockchain where it

\textsuperscript{35} This matter is discussed in more detail in chapter 3.1. of this paper.

\textsuperscript{36} Constitution of the Republic of Estonia - RT I, 15.05.2015, 2.


cannot be altered afterwards.\textsuperscript{39} Therefore, a smart contract could be legally binding in cases where the law dictates that such type of contract must be concluded in a format which can be reproduced.

Coming to our example contracts - insurance and sales contract for a movable - no format requirements are set out in the law. However, as regards to the insurance contract, a certain information by insurer must be nevertheless provided to a policyholder in a format which can be reproduced in writing according to LOA § 430, including the standard terms of such contract and obligations of insurer if they differ from standard terms according to LOA § 428 (1) (3),(4) - thus probably such terms of a smart contract that would be included in the code. But as already explained above, smart contract can be regarded as fulfilling such format.

It must be also discussed whether it would be possible to conclude a smart contract in a so-called higher format, i.e. in a written format or in a format which requires certification by a notary or an authentication by a notary. As regards to written format, it has been affirmed in legal literature that from technical perspective it would indeed be possible to digitally sign a smart contract as it is possible to link a document within the blockchain via a time stamped hash.\textsuperscript{40} Such contract would be then concluded in an electronic format which is generally deemed to be equal to a contract in written format according to GPCCA § 80 (1). Therefore, at least regards to the format, it would be possible to use a smart contract to conclude, for an example, an employment contract (Employment Contracts Act\textsuperscript{41} § 4 (2)).

If a certain type of contract would require a notarial certification in the meaning of GPCCA § 81 (1), such condition could be met as a notary could certify the electronic signatures of the parties. It has been explained in legal literature, that the notarial notation which is given in the course of the notarial certification in the meaning of Notarisation Act\textsuperscript{42} § 38 (1) can also be given in electronic form - thus a document existing only in digital form can be certified by a notary.\textsuperscript{43} However, a problem may occur in the case where a contract has to be authenticated by a notary in the meaning of GPCCA § 82. In such a case, the notary has to explain the meaning and legal consequences of such a transaction according to the Notarisation Act § 18 (1). The problem consists of the fact that if the notary is not familiar with the programming language (e.g. Solidity) in which the contract’s terms (or at least some of them) have been written, the notary does not understand their content and thus is unable to explain it to the parties. Although the authors of this paper do not hold information how many notaries in

\textsuperscript{39} M. Raskin, p 319.
\textsuperscript{40} F. Gillioz.
\textsuperscript{41} Employment Contracts Act - RT I, 28.11.2017, 30.
\textsuperscript{42} Notarisation Act - RT I, 10.03.2016, 14.
\textsuperscript{43} P. Varul, et al. Tsiviilõiguse üldosa. Tallinn: Juura 2012, p 129.
Estonia are familiar with such programming languages, it would be reasonable to assume that there are very few, if any.

The requirement for a contract (or a transaction) to be authenticated by a notary has been established the following contracts and transactions: transactions with an immovable (Law of Property Act\textsuperscript{44} § 64, § 119 (2), § 120 (1)); a transaction constituting an obligation to transfer a share and a disposition (Commercial Code\textsuperscript{45} § 149 (4)); a transaction constituting an obligation pledge a share and disposition (Commercial Code § 151 (2)); a succession contract (Law of Succession Act\textsuperscript{46} § 100); marital property contract (Family Law Act\textsuperscript{47} § 60); and maintenance contract (LOA § 573).\textsuperscript{48} Therefore, today it would be practically impossible to conclude such contracts (or contracts including such transactions) as a smart contract since according to LOA § 11 (2) a contract which must be entered into in a specific format according to law, shall not be deemed to have been entered into until such specific format is given to the contract.

1.2.2. Obligation to present the content of a contract in unambiguous manner

There is a number of provisions in the LOA which dictate how the content of a contract has to be explained to the party being on a weaker position than the other party. Firstly, such rules are established in the case where a contract includes standard terms. Namely, LOA § 37 (3) states that standard terms must be understandable without considerable effort and if not, such standard terms are not deemed to be part of the contract. This means that standard terms have to be drawn up in easily understandable language and not contain complicated sentences, uncommon words and specific terminology. If the standard terms are used in a contract concluded with a consumer, the text has to be understandable for an average consumer without any specific preparation.\textsuperscript{49} If standard terms are used in a contract concluded with the other party acting in its economic or professional activities, it can be presumed that such party is better prepared to understand the specific terminology and more complicated use of language. However, in both cases the text of standard terms must be presented in a readable manner.\textsuperscript{50}

The authors of this paper are of the opinion that according to the aforementioned it is not possible to set out standard terms (in smart legal contract nor in smart code contract) in the

\textsuperscript{44} Law of Property Act - RT I, 25.01.2017, 5.
\textsuperscript{46} Law of Succession Act - RT I, 10.03.2016, 16.
\textsuperscript{47} Family law Act - RT I, 09.05.2017, 28.
\textsuperscript{48} P. Varul, et al. Tsiviilõiguse üldosa, p 130.
\textsuperscript{50} Ibid, § 37 (3), cl 4.4.3, p 208.
code as the code would not be readable to the other party. It seems to be the current approach of legal literature that the standard terms have to be provided in readable text form. Even if the other party would be acting in its economic or professional activities (thus not a consumer), it would not be reasonable to expect that latter would be capable of reading and understanding the content of programmed code, unless its economic or professional activity would be acting in IT sector. Therefore, it can be stated that according to the applicable law it is not possible to have standard terms coded in a program and use them in contract.

As regards to our sample contracts, standard terms would be probably used in an insurance contract, as typically insurance companies use such terms. The term by which the insurer Y has to pay compensation to X if the latter’s flight is delayed at least three hours, would probably be considered to be a standard term of such contract. It must be mentioned that for insurance contract it has been specifically provided that the standard terms used in the contract must be provided for policyholder in an unambiguous manner (LOA § 430, § 428 (1) (3)) which in essence is the same rule which derives from the aforementioned LOA § 37 (3).

In any case, it would not be possible to have such obligation established in a code. Moreover, LOA § 428 (1) (4) and § 430 actually establish that if an obligation of insurer is not provided in the standard terms, it should still be presented in an unambiguous manner to the policyholder. Therefore, in the case of an insurance contract, it would be in any way unlawful to have the obligations of the insurer established in a code.

Secondly, in case of a consumer contract, the party acting in its economic or professional activities has to provide information to the consumer about the main characteristics of the object of the contract in plain and intelligible language. Moreover, this information must be given before the contract is concluded. Such requirement is provided as a general provision in LOA § 141 (1) (2). In case a consumer contract is concluded as an off-premises contract, a similar principle is established in LOA § 48 (1) (4) and § 48 (2); if consumer contract is concluded as a distance contract, such requirement is provided in LOA § 54 (1) (4) and § 54 (2). Furthermore, all of the aforementioned provisions provide an extensive list of other type of information which must be provided to a consumer in a comprehensively understandable way.

The authors of this paper are of the opinion that the aforementioned definitely hinders concluding a smart contract with a consumer. To be more precise, a smart legal contract and a smart code contract have to be discussed separately in the light of this issue. As regards to the smart legal contract, it would be possible to conclude it with a consumer if the code would not include the main obligations of the party acting in its economic or professional activities or
any of the information which must be given to the consumer according to LOA § 14¹ (1) (2); or LOA § 48 (1) (4) and § 48 (2); or LOA 54 (1) (4) and § 54 (2).⁵¹ Thus, the main obligations and relevant information would have to be described in the so-called traditional part of the smart legal contract. This, however, reduces the purpose of using a smart contract because it’s aim would be to automate party’s obligations and therefore, there would not be much of a point to use smart legal contracts as consumer contracts. If we take our example insurance contract, it was already established that it would be unlawful to set out the insurer’s obligations in the code. As the insurance contract between Y and X would also be considered as a consumer contract, setting the obligation of paying compensation would also be unlawful according to LOA § 14¹ (1) (2) as one of the main characteristics of such contract would be the obligation to pay compensation.

As regards to a smart code contract, it would not be possible at any event to conclude a consumer contract as all of the terms of the contract would be incorporated to a code which is unreadable to an average consumer. However, as our example smart code contract of selling movie ticket is not a consumer contract, since either of the parties are acting in their economical or professional activities, the aforementioned does not hinder concluding such contract.

One may bring up a solution that such terms which have to be clearly expressed to the party could still be set out in the code, thus be self-executed, if such terms would also in parallel be provided to the contracting party in plain Estonian. The authors of this paper find that this would be a possibility, however, it must be noted that in such case another problem arises if there should be any inconsistencies between the code and Estonian text. Moreover, there is an issue if the party understands the Estonian text in one way and the terms in the code are actually different in that sense. In both of those cases, the problem consists in the following question: which - the code or the Estonian text - has the legal power. Taking into account the fact that the purpose of the aforementioned provisions should be to protect the weaker side of the contract who has less bargaining power, it would probably be correct to conclude that the Estonian text should hold priority over the code. Therefore, it is indeed possible to have such terms, which have to be unambiguously presented to the weaker side of the contract, in the form of a code if in parallel Estonian text is provided. However, the latter must be drafted in a very careful manner to avoid situations where there would be inconsistencies between the text and the code and false understandings on the basis of the text.

⁵¹ The precise applicable provision depends on the type of the consumer contract.
1.3. Repealing a smart contract

In many cases the law dictates that if its mandatorily applicable rules are not followed, such contracts are deemed as invalid. For example, according to GPCCA § 86 (1) a transaction which is contrary to good morals or public order is void and there is a number of other basis provided where contracts are held to be null. For these cases GPCCA § 84 (1) provides that such transactions do not have legal consequences from inception and if anything is already received on the basis of a void transaction, it should generally be returned pursuant to the provisions concerning unjust enrichment. Moreover, GPCCA § 90 (1) reads different basis when a contract can be cancelled and provides that in the case of cancellation, such a contract is invalid from inception.

The legal bindingness of a smart contract can be challenged on the basis of the fact that their execution is somewhat contradictory to the rules of law which declare contracts as invalid. Namely, as already explained in the introduction, smart contract is a self-enforceable: once it is concluded, its further execution is no longer dependent on the will of its parties or a third party, neither does it require any additional approvals or actions from their side. This is the very essence of blockchain to provide absolute certainty that blocks remain unchanged through time and once something is entered, it stays there in that way. In the light of that, it has been pointed out in legal literature that whether there is a basis for holding a contract invalid, it is irrelevant to the execution of a smart contract.52

At the same time, it has been further explained that it is nevertheless possible to apply relevant provisions on invalidity of contract and its consequences - e.g. damages claims, obligation to return everything received under the agreement, etc. However, even in this case such actions would not have impact on the content of blockchain database as the block containing invalid contract will remain unchanged.53

The authors of this paper agree that there is a problem in the contradiction which derives between GPCCA § 84 (1), § 90 (1) and the nature of blockchain technology. From legal standpoint it seems absurd that if a basis for invalidity of a contract can be witnessed, such contract is still executed irrespective of the latter. However, it also seems nonsensical from the position of IT to change the currently known blockchain system by which the blocks cannot be altered. To overcome this problem in a sensible middle way would be to have another code entered into blockchain which would accurately reverse the former transaction immediately. This would require giving GPCCA § 84 (1), § 90 (1) a wider interpretation in

52 A. Savelyev, p 15.
the sense that an invalid contract would still be executed, however, it would be promptly “turned around” and the former correct legal situation would be restored.
2. CONTRACTUAL TERMS OF A SMART CONTRACT

2.1. Contractual terms as a computer code

As already explained in introduction, there are two types of smart contracts - smart legal contracts and smart code contracts. The thing in common of the two is that they both use computer code for their contractual terms - smart code contracts use it for all of its contractual terms and smart legal contracts use it to a certain extent.

One may ask whether it is even possible to express contractual terms in a computer language. As regards to that, it has been explained in legal literature that in most cases this is not an issue. Contractual terms can indeed be written in programming languages because the performance and enforcement of any contract is in essence executing a series of conditional statements.\(^{54}\) When taking the example of insurance contract, if the flight is delayed at least three hours, then Y will pay X a certain amount of money. At the same time, performing conditional statements is actually how computer programs themselves work. It is foundational to computing, as a computer code is based on statements like “if x then y”.\(^{55}\) Thus, generally writing contractual terms in computer language is not hindered.

However, not all terms of contracts can be expressed in a computer code. Namely, there is no point presenting such terms in computer code which cannot be self-executed.\(^ {56}\) To be more precise, it has been explained in legal literature that generally legal contracts have two kind of aspects - the operational and non-operational aspects.

The first ones are the parts of the contract that we wish to automate, which typically derive from consideration of precise actions to be taken by the parties and therefore are concerned with performing contract. The second ones, however, are the parts of the contract that we do not wish to (or cannot) automate.\(^ {57}\) Thus, as a rule, non-operational clauses should not be inserted in a computer code - for example, it would not make sense to automate clauses which describe the dispute resolution mechanism between the parties. Moreover, it is not sensible to use code as terms of a contract for these elements of contractual relationship that require human judgement. For example, if there is a supplier of goods who initiates smart contract with a retailer, then the payment terms could be defined in code and executed automatically upon delivery. However, the retailer would likely insist that the contract includes an indemnity clause and due to the latter there would be no point representing such clause in code since it is something that cannot self-execute. So, it can be said that such clauses that

\(^{54}\) M. Raskin, p 312.
\(^{55}\) A. Savelyev, p 14.
\(^{56}\) J. Stark.
\(^{57}\) C. D. Clack, V. A. Bakshi, L. Braine, p 5.
protect a party from various liabilities may not be suitable for execution through code (e.g. confidentiality clause, severability clause).\textsuperscript{58} Therefore, automating self-execution is only possible if the execution of a certain operation term is objective enough.

### 2.2. Interpretation of contractual terms established in code

It must be pointed out that the interpretation of the terms established in the code is significantly different from the way traditional contracts are interpreted. When a traditional contract is interpreted by a human, it is based on a subjective criteria and analogous way of thinking.\textsuperscript{59} However, when computer interprets the contractual terms of a smart contract, Boolean logic is used, which means that all of the values of the terms are reduced by either “true” or “false”. Programming languages in their nature are formal in their substance with strictly defined semantics and syntax.\textsuperscript{60} Therefore, it can be even said that in case of smart contracts there is no other way of interpretation but only the grammatical.

On the one hand, the positive effect from the aforementioned is that it is possible to mitigate issues associated with unpredictable interpretation of contractual terms by a party or enforcement agency (e.g. court). As there are fewer terms that a computer can recognize compared to a human, there are less ambiguities with the interpretation of smart contract terms.\textsuperscript{61} Therefore, the parties would probably be more cautious while drafting the contract to make sure that their intentions are correctly set out in the contractual terms.

On the other hand, it has been pointed out in legal literature that in the context of a smart contract the existing rules on interpreting contracts are not applicable. For example, the terms of a smart contract should not be interpreted according to the common intention of the parties if it differs from the literal meaning of the words in the contract or according to the understanding of a reasonable person.\textsuperscript{62} The authors of this paper do not agree with the latter statement that the interpretation rules (derived primarily from LOA § 29) are not applicable and should not be used. Indeed, when the computer executes the agreement only using the grammatical interpretation, the applicable interpretation rules are left aside. However, if a dispute arises later between the parties regarding the interpretation of the terms of the contract, the interpretation rules should be applied. In that case, when the dispute is discussed by a court or by ADR mechanism\textsuperscript{63}, the terms can still be interpreted according to LOA § 29.

\textsuperscript{58} F. Gillioz.
\textsuperscript{59} A. Savelyev, p 13.
\textsuperscript{60} \textit{Ibid}.
\textsuperscript{61} \textit{Ibid}.
\textsuperscript{63} The matter of dispute resolution is discussed in more detail in chapter 3.1. of this paper.

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3. RESOLVING SMART CONTRACT RELATED DISPUTES

3.1. Choosing a dispute resolution mechanism for a smart contract

It is highly likely that evolving technology and thus smart contracts will have a significant impact on how legal disputes arising from the said contracts will be resolved. The problem is that with fast and efficient self-executing smart contract, naturally, there is also a need for a fast and efficient dispute resolution mechanism. In this section the authors will analyse different dispute resolution mechanisms and how they should be agreed upon in a smart contract.

There are quite a few options available that can be used as a dispute resolution mechanism in case of a smart contract related disputes. When it comes to national disputes, i.e. disputes between parties of the same nationality in their country of origins, the case is simpler when compared to cross-border disputes.\(^ {64}\)

When consumers have a problem with a trader regarding a product or service they bought, they can settle their dispute out-of-court through an alternative dispute resolution procedure. Such procedures are an alternative to resolving disputes before a court and are hence called as alternative dispute resolution (hereinafter ADR). When they are carried out online, they are called online dispute resolution (hereinafter ODR).\(^ {65}\) Resolving disputes through ADR, in general, is easier, faster and less expensive than resolving disputes before a court. In the European Union, ADR procedures can take different forms and have different names e.g. mediation, conciliation, ombudsman, arbitration and complaints boards. The question is now the following - how should the ADR be agreed upon when it comes to smart contracts?

It can be said that smart contract blurs the boundaries between the original contract and its execution. Also, the demarcation between contractual law and procedural law becomes more difficult to ascertain. For example, the role of dispute resolution clauses must be reassessed when the contract is enforced automatically. It can be said that it is probable that dispute resolution clauses lose at least some of their current importance in cross-border commercial contracts.\(^ {66}\) Still the question remains how the parties can agree upon a dispute resolution mechanism in case a dispute arises from a smart contract, be it from an error in coding, payments or goods not being transferred, etc. One can even argue that it is not possible for a breach to occur in case of a smart contract as it is self-executable and therefore obligations are

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\(^ {64}\) R. Koulu, p 40.


\(^ {66}\) R. Koulu, p 55.
always executed. However, the authors of this paper are of the opinion that a breach is in fact possible. Take for an example a smart contract where A buys a cinema ticket from B. There could be an error in the code that puts the wrong date on the ticket. If no dispute resolution mechanism is agreed upon, this dispute must still be resolved in a court as otherwise the rights of the damaged party may not be defended at all.

One option could be the aforementioned ODR platform as it might be possible in the future to connect a smart code directly to ODR platforms. When a claimant submits a notice through the ODR platform to the ODR administrator, the ODR administrator informs the respondent of the existence of the claim and the claimant of the response. Then the process of an ODR proceeding may consist of the following stages: negotiation; facilitated settlement; and a third (final) stage.67

The first stage of the proceedings - a technology-enabled negotiation - commences, in which the claimant and respondent negotiate directly with one another through the ODR platform. If that negotiation process fails (i.e. does not result in a settlement of the claim), the process may move to a second, “facilitated settlement” stage. In that stage the ODR administrator appoints a neutral, who communicates with the parties in an attempt to reach a settlement. If facilitated settlement fails, a third and final stage of ODR proceedings may commence, in which case the ODR administrator or neutral may inform the parties of the nature of such stage.68 The third stage would most likely be determined by the parties themselves, e.g. resolving the dispute in court proceedings.

In order to begin an ODR process, the smart contract needs to be programmed in a way so that the program itself submits a notice of a breach to the ODR platform. These executable conditions can be agreed upon by both parties if they are known. If either party remains anonymous then one needs to accept the fact that these executable clauses may not be a subject of negotiation. However, at the moment this technology still doesn’t exist, or, at least not in a completely efficient and trustworthy form, and therefore ADR methods instead must be considered. Smart contracts have the potential to replace existing intermediaries and gatekeepers, but not yet courts or other official dispute resolution mechanisms. Still public courts and the judicial system will have to transform to keep up with the technology.69

69 N. Guggenberger, p 97.
Leaving ODR on the side for now, the authors of this paper find that there are potentially two methods on how to agree upon a dispute resolution method for a smart contract related dispute. Firstly, it could be possible to write a standard dispute resolution clause straight into the code in a manner that does not interfere with the execution of the code. However, this would require that parties actually check the code and look for the said comments there. This would be extremely inconvenient and difficult for those who are not familiar with computer code. A second option would be that the dispute resolution clause is already in the overview of the contract being concluded. When a contract is executed, both parties simply receive a document with the dispute resolution agreement along with the payment/commodity/service.

3.2. Smart contract as evidence

The question of whether a smart contract can be used as an evidence contains within itself two independent problems - firstly, does the form of the smart contract allow it to be understood and used as evidence (i.e. is it possible to understand the code) and secondly, is the form of the smart contract allowed as evidence under the Code of Civil Procedure (hereinafter CCP). Both of these questions will be analysed in the following sections.

As stated in the introduction, a smart contract is generally regarded to be a type of cryptographic contract in which verification and contractual obligations are executed through a self-enforced computer code. According to the CCP § 229 (2) an evidence may be the testimony of a witness, statements of participants in a proceeding given under oath, documentary evidence, physical evidence, inspection or an expert opinion. In a proceeding on petition the court may also deem other means of proof, including a statement of a participant in the proceeding which is not given under oath, to be sufficient in order to prove the facts. This is an exhaustive list and thus, a smart contract must fit under one of the above mentioned categories. It is the opinion of the authors of this paper that a smart contract does not qualify exactly under any of the categories provided by the CCP. Electronic documents do not have a body in the physical sense. In this case the data carrier, this by itself can be a physical evidence for its outward appearance (i.e. scratches, dents, dirt), however the data stored on the carrier represents as documentary evidence. Therefore a computer code is categorised as documentary evidence.

It is not enough that we can classify a smart contract under an evidence category. According to the CCP § 229 an evidence must meet four criteria so that it could be admitted as an evidence in court proceedings. These are relevance, admissibility, credibility and weight or

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probative value.\textsuperscript{72} For a smart contract to be used as evidence, it must obviously also meet this criteria. In such cases, the court must determine the reliability of any computer records that are introduced as evidence. The value of such evidence is called its legal competency.\textsuperscript{73} This must be determined case by case as these criteria cannot be determined beforehand.

Smart contract differs from regular computer evidence (e.g. e-mails, digital photographs, ATM transaction logs, word processing documents, instant message histories, etc.) as they are potentially very difficult to alter if blockchain technology is used. However, if a less secure technology is used, the odds of misconduct rise. The use of a computer printout to prove facts that are unsubstantiated by other material may lead to serious abuse and errors in the judicial process. It is clear that without special knowledge it is almost impossible to understand what a code does just by reading it. Thus, it is the opinion of the authors of this paper that it is necessary to support the main evidence (the smart contract code) with an expert opinion. Experts have the necessary knowledge and background to understand how a certain code works and are able to pinpoint errors in the said code. Most likely judges and even the parties to a smart contract lack this expert knowledge. Experts can also give their opinion as to whether a smart contract code has been made in a manner that both parties have agreed upon, i.e. does it do what it needs to do.

In conclusion, it is the opinion of the authors that a smart contract can be used as an evidence due to the fact that it entails a code and therefore can be classified as documentary evidence. However, such evidence must be analysed case by case as it must also meet further criteria such as relevance, admissibility, credibility and weight or probative value for it to be admissible. It is highly recommended that additional supporting evidence like an expert’s opinion be used to support the main evidence as it is likely that neither the judge or even parties to the agreement actually understand the code.

3.3. Jurisdiction over a smart contract related dispute

Jurisdiction is always an important question in legal disputes. As the world gets more and more connected through culture, technology, travel, business, etc., it is clear that cross border transactions will also continue to grow rapidly. With the rise of the smart contract there will soon be a need for a clear understanding about the jurisdiction that applies to smart contract related disputes. It is important to distinguish between national and cross-border transactions as this greatly affects the jurisdiction that applies. Some authors argue that due to the constraints of territorial jurisdiction, state sovereignty and the newness of ODR, there are no

\textsuperscript{72} V. Köve, et al (eds), chapter 24, cl 2, p-s 1238-1240.

global legal instruments for regulating legal issues related to cross-border ODR. This means that the choice of law or jurisdiction, or the recognition and enforcement of ODR decisions, are all determined based on national law, which may often lead to complications in cross-border situations. However, the authors of this paper would argue that at least in the European Union there are instruments that could help with determining the jurisdiction. These instruments will be analysed in the following sections.

When it comes to disputes stemming from a national smart contract that has no international dimension, the legal situation is clear - the CCP applies. According to CCP § 79 (1) an action against a natural person can be filed with the court of his or her residence and an action against a legal person can be filed with the court of its seat. Using the example where consumer X has concluded a travel insurance contract with insurance company Y - if X is in breach of contract and is an Estonian resident, then an action can only be made in an Estonian court and the same principle applies if Y has its seat in Estonia.

Things get more complicated if the smart contract is a cross-border contract. Traditionally, ways of conducting cross-border transactions have been limited by the non-existence or lack of predictable and trustworthy modes of dispute resolution and enforcement. Add to that the uncertainty that may rise from the question of applicable jurisdiction and the potential outcome is a serious lack in the trustworthiness of online transactions. If a smart contract has been deemed legally binding and the person being sued is a national of a European Union Member State, then according to Regulation (EU) No 1215/2012 (hereinafter Brussels I bis) article 1 (1), the jurisdiction for said dispute must be determined according to the Brussels I bis regulation. According to its article 4 (1), persons domiciled in a Member State shall, whatever their nationality, be sued in the courts of that Member State. This applies to both natural and legal persons and applies to cases where neither party can be classified as a consumer.

Coming back to the example where consumer X has concluded a travel insurance contract with insurance company Y, then according to Brussels I bis article 18 (1) a consumer may bring proceedings against the other party to a contract either in the courts of the Member State in which that party is domiciled or, regardless of the domicile of the other party, in the courts for the place where the consumer is domiciled. Additionally, article 18 (2) states that proceedings may be brought against a consumer by the other party to the contract only in the

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74 R. Koulu, p 43.
courts of the Member State in which the consumer is domiciled. Therefore, it is safe to say that if for example X is Estonian and Y is domiciled in Germany and Y is in breach of a smart contract, X can may bring proceedings against Y in both Estonia and Germany. If X is in breach of the agreement, then Y can bring proceedings against X in Estonia.

Brussels I bis also offers the opportunity to agree upon the applicable jurisdiction. Article 25 (1) (a) states that if the parties, regardless of their domicile, have agreed that a court or the courts of a Member State are to have jurisdiction to settle any disputes which have arisen or which may arise in connection with a particular legal relationship, that court or those courts shall have jurisdiction, unless the agreement is null and void as to its substantive validity under the law of that Member State. Such jurisdiction shall be exclusive unless the parties have agreed otherwise. The agreement conferring jurisdiction shall be either in writing or evidenced in writing. This gives the parties of a smart contract the chance to choose their own applicable jurisdiction. Article 25 (2) even provides an opportunity to tie this agreement to the smart contract as any communication by electronic means which provides a durable record of the agreement shall be equivalent to “writing”.

Therefore, it can be said that there is no one certain answer who would have jurisdiction as this is highly dependent on who are the contractual parties and whether they have agreed upon a certain applicable jurisdiction

3.4 Defendant in the case of a smart contract related dispute

The question of who would be the defendant in case of a smart contract related dispute is a highly complex one as its answer depends a lot on whether the contractual parties are anonymous or not. A further potential issue is identifying the party who has breached the contract. As previously stated, a smart contract is not the typical contract as it is self-executable and there is a potential that the other party to the contract is unknown. Thus, in order to take action against someone, we first need to identify who is responsible for the breach.

If we come back to the example case where consumer X has concluded a travel insurance contract with the insurance company Y, it is highly doubtful that both X and Y can be anonymous parties as concluding this sort of agreement without identifying both parties is practically impossible. By knowing who the parties to the contract are, we have already solved a major issue regarding against who we can take action. The only question that remains in this case is who has breached the contract. If there is no oracle in between, then determining which party is in breach should not be that difficult.
However, things get a lot more complicated once we introduce automated software agents to the mix. Automated software agents can be programmed with their own Bitcoin wallets, and can release funds, or not, according to consumer-set parameters. If companies do not satisfy the parameters, the deal does not go through. Consider a simple smart contract that a consumer instructs to buy a toaster. It is programmed to seek a single unit of the item, at the lowest price, and subject to a reservation of all rights and remedies, including all standard consumer warranties. The agent is connected to a Bitcoin wallet, and can therefore pay for the item without releasing the consumer’s identity into the wild. Indeed, depending on the nature of the transaction and the need for shipping addresses, it is entirely possible that the agent can buy and sell on the consumer’s behalf without providing any information about the consumer to the company at all.77

As stated previously, even if a party uses an electronic agent for concluding a contract a will of that party is established as this individual has decided to use such an agent for conclusion of certain agreements and has agreed to be bound by their actions. Because a party has agreed to be bound with the activities of the agent, it could be qualified under GPCCA § 115 (1) according to which a transaction may be entered into through a representative. A transaction entered into by a representative is valid with regard to the principal if the representative entered into the transaction on behalf of the principal and the representative had the right of representation in entry into the transaction. According to GPCCA § 130 (1) a person without the right of representation who enters into a transaction on behalf of another person shall compensate the other party for the expenses incurred upon preparation for the transaction and for any other damage which the other party has incurred in connection with the transaction because the party believed the person to have had the right of representation, unless the person on whose behalf the transaction was entered into ratifies the transaction. Therefore, it can be stated that if an oracle is being used for example, the party would still be the person “employing” the oracle. In such a case the party would be responsible for the breach even if it stems from an error made by the oracle if they approve the actions of the oracle.

In many cases a smart contract will be created by specialized companies based on the request from the client. Due to a separation between the person programming the code and the person intending to use it in its commercial activities, there is a risk of misunderstanding between them with regard to the terms of the future agreement. Ultimately, it is about the differences between implementation and intent, which is aggravated by the gap of abstraction between legal language and a programming language. However, it can be argued that such

misinterpretations should be within the sphere of responsibility of the person implementing the smart contract and resolved within the existing contractual framework with its contractor. Such errors should not affect external parties, persons that are subsequently accepting the terms of such agreement and become a party to a smart contract. Moreover, it can be pointed out that the computer code can become automatically subject to various flaws and bugs. Leaving the matters of qualification of attacker’s actions aside, it is possible to state that a smart contract is still subject to human misjudgement and although they are potentially immune to mistakes in legal terminology and drafting, they are still vulnerable to coding errors.  

Therefore, in conclusion it must be stated that there is no simple answer to who will be the defendant in case of a smart contract dispute. As demonstrated above, the question of a potential defendant depends heavily on the nature of the smart contract - who are the parties, do they have representatives, e.g. oracles, are the parties known or anonymous etc. Thus, it is clear that the question of who is the defendant can only be answered case by case.

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78 A. Savelyev, p 14.
SUMMARY

Smart contract is a contract which allows verifying and executing obligations through a self-enforced computer code. There has been a lot of coverage in literature about the beneficial uses of a smart contract, however, its legal status has been somewhat obscure. Deriving from the latter, the purpose of this paper was to clarify the legal effect and enforceability of a smart contract under Estonian law.

First of all, it was discussed whether a smart contract can be considered as a binding contract under Estonian law. It was deliberated whether it is possible to witness a clear exchange of offer and acceptance in the meaning of LOA § 9 (1) when a smart contract is concluded. The authors found that regarding a smart legal contract, the exchange of intents would probably be in a traditional manner, e.g. via email communication. Thus, no specific problems in that matter would likely arise. Talking about smart code contracts, however, the offer and acceptance would be exchanged on blockchain - the offer being the act of posting a code on blockchain and acceptance being the act of executing it. The authors found such conducts to be clear enough to consist of offer and acceptance in the meaning of law.

Furthermore, it was discussed whether the parties of a smart contract have an intent to create legal relations according to LOA § 8 (1). The authors were of the opinion that in the case of a smart legal contract such intent should generally be witnessed as there is also a traditional contract governing the relations of the parties. Regarding smart code contract, the situation is again more complex. However, the authors found that such intent is apparent since a smart code contract is used for governing such relations which is usually done by traditional contracts, it is applied for exercising genuine legal obligations and such obligations can be breached. Thus, it can be concluded that in both cases a smart contract in essence can be a legally binding contract according to Estonian law.

Moreover, it was discussed whether in case of a smart contract it would be possible to meet the requirements which are prescribed for different types of contracts. As regards to the format of a contract, a smart contract should be regarded as a format which can be reproduced in writing in the sense of GPCCA § 79 as the code stored on blockchain is available later on. If the law would dictate a higher format for particular type of contract, a smart contract could also be digitally signed, converting the contract into electronic format (GPCCA § 80 (1)) which is equal to written format. Moreover, a smart contract could also be certified by notary in the meaning of GPCCA § 81 (1), however, it would not be possible to have a smart contract authenticated by a notary because most likely the notary would not be able to explain
the content of the code to the parties. Thus, it is not possible to conclude a contract for which the law dictates the latter format requirement as a smart contract.

Furthermore, in case a contract includes a party being a weaker side of such transaction, law often dictates an obligation to the other side to explain the content of the contract or at least obligations of the other party to the weaker party in readable unambiguous manner. This is the case for contracts containing standard terms (LOA § 37 (3)) and consumer contracts (e.g. LOA § 14 (1)(2)). Thus, as regards to standard terms, it would be unlawful to have them in the form of code. In the case of consumer contracts, it would be unlawful to use code in contract at all. Therefore, in the latter case, it would not be possible to conclude a smart code contract with a consumer, however, it would be possible to conclude smart legal contract if the code would not contain the main legal obligations of the party acting in its economic or professional activities. It must be pointed out that it would be possible to have such terms which are established in code to be in parallel provided to the weaker party in plain Estonian text. However, in case of a dispute, the Estonian text would probably be held to have legal power rather than the code.

It was also discussed whether it is possible to repeal a smart contract, considering that the code executes regardless of whether it has become evident that the contract is invalid. The authors acknowledge that there is a certain contradiction between the essence of a smart contract and GPCCA § 84 (1) and § 90 (1). However, if another code would entered into blockchain which would accurately reverse the former transaction (which should be invalid) immediately, the legal situation would become just.

In addition, the topic of contractual terms of a smart contract was elaborated. It was deemed that it is possible to express contractual terms in computer code as many contractual terms are written as conditional statements. However, not all terms can be expressed in code - these are the non-operational terms which cannot be self-executed (e.g. dispute resolution clauses and indemnity clauses). Moreover, the issue of interpreting the terms in computer code was discussed. Namely, when computer interprets the terms in the code, Boolean logic is used, thus only grammatical interpretation is established. It can be said that this provides a positive effect as contractual terms are from the beginning very straightforward. However, the existing rules for interpretation (LOA § 29) are not to be yet written off because they are still relevant in case of a dispute of interpreting the terms of a contract.

Coming to the discussed issues of dispute resolution, probably one of the most intriguing questions that was elaborated in this paper was that of jurisdiction. Although some scholars believe that smart contract does not have jurisdiction due to the fact that it is self-executable
and, thus, no breach can even occur, the authors of this paper found that a breach can in fact take place. Thus, the question of resolving said disputes and hence a question of jurisdiction arises. As the position of the authors of this paper is that a smart contract can be regarded as legal contract, they also fall within the regulation that concerns jurisdiction of civil contract related disputes. Jurisdiction can be determined according to national regulation and European Union instruments such as the Brussels I bis regulation.

In addition to jurisdiction the question of how a dispute resolution mechanism should be agreed upon was discussed. The authors came to the conclusion that no one answer is possible as the agreement on the mechanism is dependent on the current technological possibilities. In the future it may be possible that the mechanism is written into the smart contract itself and executed automatically if a breach takes place. However, it is safe to say that currently this is not possible and a more traditional approach must be taken. This means that the mechanism needs to be either written into the code as a non-executable part or the dispute resolution mechanism is agreed upon with an entirely separate document and then delivered to both parties along with the goods or payment.

Regarding the use of a smart contract as evidence the authors believe that this could be possible according to Estonian regulation. However, reservation to this must be made as simply submitting the code of a smart contract as evidence may prove useless if a judge or even the parties do not possess the necessary knowledge to understand the code. Therefore, the main evidence should be supported with additional pieces of evidence such as an expert opinion.

Finally, the authors of this paper believe that the question of who would be the defendant in a smart contract related court dispute must also be addressed case by case. It is important to identify who the parties to a contract even are and whether or not a third party, such as an oracle working on someone’s behalf is also involved in the dispute. When the parties and the relations between them have been identified, the next step would be to identify which party is in breach of the contract. Only when these fundamental questions have been answered, we can proceed to determining who would be the defendant in a dispute resolution - be it in a traditional court proceeding or an alternative dispute resolution mechanism.
### USED ABBREVIATIONS

<table>
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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADR</td>
<td>Alternative Dispute Resolution</td>
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<tr>
<td>CCP</td>
<td>Code of Civil Procedure</td>
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<td>ETH</td>
<td>Ethereum</td>
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<td>GPCCA</td>
<td>General Part of the Civil Code Act</td>
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<tr>
<td>LOA</td>
<td>Law of Obligations Act</td>
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<tr>
<td>ODR</td>
<td>Online dispute resolution</td>
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USED LITERATURE


USED LEGAL ACTS


34. Law of Succession Act - RT I, 10.03.2016, 16.
USED CASE LAW

35. Supreme Court of Estonia 11.04.2016 decision no 3-3-1-75-15