




Smart Contracts and Financial Inclusion



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What are 'smart contracts'?

- ▶ Legally binding contracts in which some or all the contractual terms are defined in and/or performed automatically by a computer program (UK Law Commission 2021).
- ▶ UK Law Commission differentiates three types of smart contracts:
 - ▶ **Natural language contract with automated performance:** contract drafted in usual/natural language that is used to communicate between people with automated code-based performance;
 - ▶ **Hybrid contract:** some terms of the contract are defined in natural language and others in the code of a computer program. Some or all contractual obligations are performed automatically by the code. The same contractual term(s) can be written in both natural language and in code.; or
 - ▶ **Solely code contract:** a contract made in a language used to solely instruct computers.

Law Commission of England and Wales Smart Legal Contracts, Advice to Government (Law Com No 401, CP 563, November 2021)

Financial Inclusion/exclusion

- Financial inclusion is understood as access to *affordable* financial products and services that meet consumers' needs (World Bank 2022).
- Financial inclusion means that individuals, regardless of their background or income, have *access to useful and affordable* financial products and services. These include products and services such as *banking, credit, insurance, pensions and savings*, as well as transactions and payment systems, and the use of financial technology' (UK Government 2017).
- Financial exclusion refers to a process whereby people encounter difficulties accessing and/or using financial services and products in the **mainstream market** that are appropriate to their needs and enable them to lead a normal social life in the society in which they belong.



Smart contracts and financial inclusion

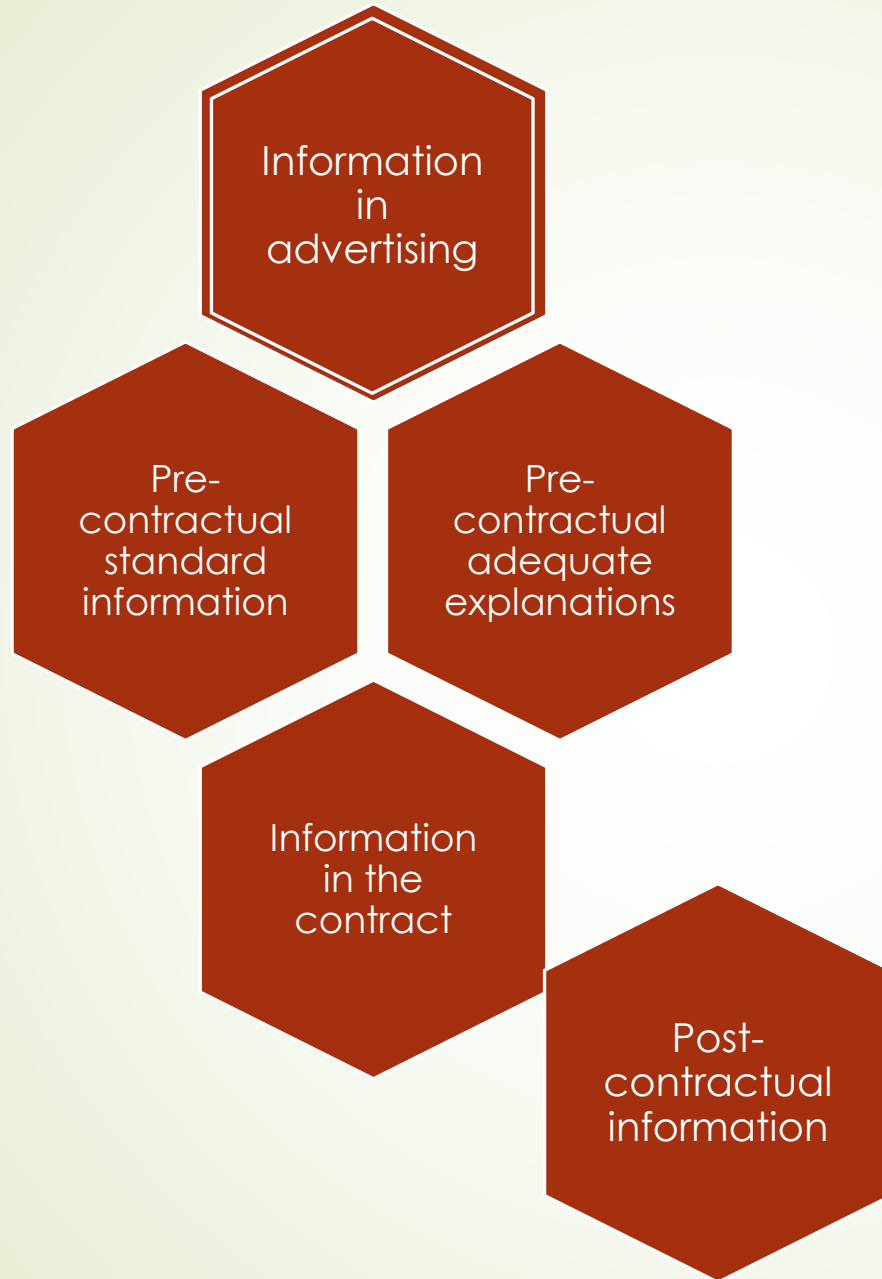
- ▶ **Smart Contract Technology and Financial Inclusion (World Bank, 2020)**
- ▶ Self-executive and efficient.
- ▶ Reduction of transaction costs, reduction of (operational) fraud - cheaper and more accessible products.
- ▶ Smart contracts cannot improve creditworthiness, alleviate credit risk and income irregularity, distance and inaccessibility, limited awareness and financial literacy, and cultural factors.




EU consumer protection framework?

- Information duties/rights
- Responsible lending
- Withdrawal rights
- Early repayment rights
- Directive 2008/48/EC of the European Parliament and of the Council of 23 April 2008 on credit agreements for consumers and repealing Council Directive 87/102/EEC (CCD')
- CJEU case-law





Information provision

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- Information provided must enable the consumer to assess **the full extent** of his/her future contractual obligations and liabilities (*C-348/14 Bucura*).
 - Information must be such as to enable the consumer to **evaluate the economic consequences** that the particular contract term would have on his/her financial position (*C-26/13 Kásler v OTP Jelzálogbank*).
 - Information must enable an **average consumer** who is reasonably observant and circumspect to ascertain and understand the information provided.
 - An average consumer does not have specialist knowledge in the financial field, but the information provided must be such as to enable him or her to calculate the rate of late-payment interest based on the information provided in the credit agreement (*C-33/20, C-187/20, C-155/20 Volkswagen Bank*).



The bar for information duties is high.

An average consumer is unlikely to be able to read and understand code language.

Information will have to be communicated in natural language - can the provision of this information be automated/coded?.

Pre-contractual standard information

- Provided via the Standard European Consumer Credit Information sheet -SECCI (Art. 5(1) and Annex II)
- Can be automated/coded.

THE CONTRACT CREDIT INFORMATION
Standard European Consumer Credit Information


1. Lender details	
Name	Bank of Ireland, operating as First European Finance in Ireland, Ireland, www.bankofireland.com
Registered office	Bank of Ireland, 100, South Wall, Dublin 1, Ireland
Branch address	100, South Wall, Dublin 1, Ireland
IFB number	00000000000000000000
IFB address	www.bankofireland.com
Country/territory	Ireland
Capital	€1,000,000,000
IFB contact details	00000000000000000000

2. Key features of the credit product	
The type of credit	Consumer credit
The start and end of the credit	From the date of the agreement until the end of the credit period
The maximum amount of credit to be drawn down by the borrower (multi-agreement or the total sum of one or more credit agreements)	€10,000
The structure of the credit agreement	The agreement is a credit agreement under the Consumer Credit Act 1995
The total amount of credit to be drawn down	€10,000
The interest rate and any other charges and fees payable on the credit	The interest rate is 6.99% per annum (variable) and the interest is calculated on the outstanding balance of the credit
Security required	The credit is secured by a charge over the borrower's property
The right of redemption or early repayment	The borrower has the right to repay the credit at any time without incurring any charges or fees

3. Example of the credit	
The type of interest rate used in the credit agreement	EAR is 6.99% (variable) and the credit is secured by a charge over the borrower's property
Annual Percentage Rate (APR) of the credit	12.99% APR (variable) and the credit is secured by a charge over the borrower's property
The APR is variable due to the variable interest rate	The APR is variable due to the variable interest rate and the credit is secured by a charge over the borrower's property
Costs of the credit	The borrower will pay a fee of €100 on the date of the agreement and a fee of €100 on the date of the first repayment
Conditions under which the credit may be changed	The credit may be changed if the borrower's credit rating changes or if the borrower's credit rating is downgraded
Other relevant information	The credit is subject to the terms and conditions of the credit agreement and the borrower must read the credit agreement carefully

Pre-contractual tailored information

- ▶ Despite the pre-contractual information to be provided, the consumer **may still need additional assistance** in order to decide which credit agreement, within the range of products proposed, is the most appropriate for his needs and financial situation (Rec. 27).
- ▶ Member States shall ensure that creditors and, where applicable, credit intermediaries **provide adequate explanations to the consumer**, **in order to place the consumer in a position enabling him to assess whether the proposed credit agreement is adapted to his needs and to his financial situation**, where appropriate by explaining the standard pre-contractual information, the essential characteristics of the products proposed and the specific effects they may have on the consumer, including the consequences of default in payment by the consumer (Art. 5(6)).

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- The creditor must provide the consumer with adequate, personalised explanations (C-449/13 CA Consumer Finance).
 - May be provided in writing or orally; this is a matter of national law (C-449/13 CA Consumer Finance).



Adequate
explanations
and smart
contracts

Pre-contractual adequate explanations need to be personalised but can be provided in writing (without signature) – can be automated as long as personalised.

Natural language processing on blockchain is not too advanced.

Personalised information form.

Information in the contract

- Art. 10(2) contains detailed information to be included in the credit agreement.
- Credit agreements shall be drawn up on paper or on another durable medium. All contracting parties shall receive a copy of the credit agreement (Art. 10(1)).
- All the information listed in Art. 10(2) must be set out on paper or on another durable medium and be incorporated into the credit agreement (*Home Credit Slovakia*).
- It is apparent from the wording of Art. 10(1) that the term 'paper' refers to the medium on which a credit agreement is drawn up, without any requirement that such a medium be signed (C-42/15 *Home Credit Slovakia*).
- The provision of the contract could be automated/coded.


Sanctions for failure to inform

- The penalties provided for must be effective, proportionate and dissuasive (Art. 23).
- The choice of penalties remains within the discretion of the Member States (C-34/13 *Kušionová*).
- National courts have *ex officio power* to examine compliance (C-377/14 *Radlinger*).
- The *burden of proof* of compliance with pre-contractual obligations in Art. 5 is on the creditor (C-449/13 *CA Consumer Finance*).



Responsible lending/creditworthiness assessment

- Member States shall ensure that, before the conclusion of the credit agreement, the creditor assesses the consumer's creditworthiness on the basis of sufficient information, where appropriate obtained from the consumer and, where necessary, on the basis of a consultation of the relevant database (Art. 8(1)).

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- 'Sufficient information'
 - Sufficiency of information is determined on case-by-case basis.
 - The sufficient nature of the information may vary depending on the circumstances in which the credit agreement was concluded, the personal situation of the consumer or the amount covered by the agreement.
 - The assessment may be carried out using supporting evidence of the consumer's financial situation, but it is possible that the creditor may take into account prior knowledge of the consumer's financial situation which it may have.
 - However, mere unsupported declarations made by the consumer may not, in themselves, be sufficient if they are not accompanied by supporting evidence (C-449/13 CA *Consumer Finance*).



Responsible lending and smart contracts



Responsible lending rules are vague



As long as the creditor can get sufficient information from various (financial and non-financial databases) it can be automated/coded- depends on advancement of natural language processing

Sanctions for failure to assess creditworthiness

- ▶ **The burden of proof** of compliance with pre-contractual obligations in Art. 8 are on the creditor (C-449/13 *CA Consumer Finance*).
- ▶ Ex officio obligation on a national court to examine, of its own motion, whether there has been a failure to comply with the creditor's pre-contractual obligation to assess the consumer's creditworthiness and to draw the consequences arising under the national law of a failure to comply with that obligation (C-679/18 *OPR Finance*).
- ▶ Since such an obligation is intended to protect consumers against the risks of over-indebtedness and bankruptcy, that obligation is of fundamental significance for consumers (C-58/18 *Schyms*).

Consumer rights

➤ Right of withdrawal

- The consumer shall have a period of 14 calendar days in which to withdraw from the credit agreement without giving any reasons.

➤ Early repayment

- The consumer shall be entitled at any time to discharge fully or partially his obligations under a credit agreement (Art. 16(1)).
- Computer codes will often be impossible to retrieve or correct, especially if codes are recorded on the blockchain, given the immutable nature of blockchains – a new code could be employed to correct the first, wrong code. The information will effectively need to be re-coded which might often lead to a need to conclude an entirely new smart contract to replace the earlier one.



Conclusions

- ▶ Smart contracts could result in cheaper, faster, and better-suited financial products.
- ▶ Code-only contracts – most probably not compliant with the legal framework.
- ▶ Natural language contract with automated performance –problematic due to performance-related consumer rights that are not compatible with smart contracts
- ▶ Hybrid contracts are the most suited to the current legal framework.
 - ▶ use code language for simple terms/commands
 - ▶ use natural language/human intervention for complex terms that require the exercise of judgment and discretion.



Thank you.

Questions?

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