

# LAW & FINANCIAL STABILITY

HIGH-LEVEL SEMINAR ————— 2018

## THE RULE OF LAW IN A DIGITAL WORLD



LEGAL  
DEPARTMENT

# SMART CONTRACTS IN SEVEN QUESTIONS

# Our panelists.

## **Patrick Murck**

Special Counsel, Cooley LLP  
Fellow, Harvard Berkman Klein Center

## **Marco Santori**

President and Chief Legal Office, Blockchain

## **Houman Shadab**

Co-Director, Accord Project

## QUESTION 1.

What are “smart contracts”? [Houman]

- a) A computer protocol intended to digitally facilitate, verify, or enforce the negotiation or performance of a contract
- b) A self-executing agreement with the terms of the contract between buyer and seller being directly written into lines of code
- c) A contract with a graduate degree from MIT

## QUESTION 2.

Will code become a contract, or is remain just a “vending machine”?  
[Houman]

- a) “Smart contracts” will never be able to do more than execute simple “if-then” instructions transposed from plain language. Courts will always look to the written agreement to determine intent.
- b) Code is more like a language that can be translated. Eventually lawyers may be able to draft even complex contracts that provide an adequate basis for contract formation, directly into code.
- c) Code is a vending machine and it can only be used to buy Coke.

## QUESTION 3.

Can smart contracts managed “soft” issues, like materiality, enforcement and anticipatory repudiation? Do they need to? [Houman]

- a) Yes, but only if you treat them very gently and with respect.
- b) Impossible. These are complex determinations that may be affected by course of dealing, industry custom and similar concerns. A smart contract may have to refer to written provisions or agreed sources of law to incorporate these elements.
- c) Yes, at least to some degree. For example, parties might agree to refer to AI-based materiality algorithms agreed in the context of specific business transactions (for example, commercial transactions).

## QUESTION 4.

What are Oracles? What are some of the risks and opportunities of hard oracles, like data feeds; and soft oracles, like adjudicators?  
[Patrick]

- a) An indisputable, authoritative information element embedded in DLT implementations, like an agreed defined term.
- b) An agent that finds and verifies real-world occurrences and submits this information as input to **smart contracts**, like a data feed.
- c) A priest or priestess acting as a medium through whom advice or prophecy was sought from the gods in classical antiquity.

## Question 5.

What are some specific challenges and opportunities for smart contracts in blockchain and DLT platforms (eg, data and money flows)? Will smart contracts work in unpermissioned systems, that do not have centralized rules? [Marco]

- a) It will be difficult for courts and parties to implement retroactive modifications to the agreement.
- b) Complex transactions can be disintermediated and executed quickly.
- c) The contracts feel imprisoned and may try to escape, particularly in unpermissioned systems.

## QUESTION 6.

Tell us how the business of smart contracts works. Are they written by law firms? How do we assure transparency to users? Who is liable, and to whom, if the contracts are faulty expressions of parties' intent?  
[Patrick]

- a) In the future, smart contracts will be written by magical elves who have been laid off from the cookie factory.
- b) Lawyers are obsolete. Coders will develop comprehensive "if-then" logic that will be transparent and clear to users.
- c) Lawyers and coders will work together to develop context-specific solutions to reflect parties' intent, including trade-offs between nuance and efficiency. Coders may be held to a duty of care if their product does not reflect the parties' agreed intent.

## QUESTION 7.

What new skills and knowledge will lawyers require, to assure that smart contracts reflect the intent of the parties? What are some lessons learned having technologists and lawyers in the same room?  
[Marco]

- a) Lawyers will have to become coders. We are doomed.
- b) Coders will have to become lawyers. We are doomed.
- c) “Smart contracts will require multidisciplinary teams that not only include lawyers, but also software developers who translate legal constructs into self-executing transactional structures, and software coders who put it all into the necessary code. This change not only represents a new practice model, but also a new business model that will, most likely, require new payment terms.” (Chris Combs, LinkSquares, February 14, 2018)

THANK YOU!