

P.R.I.M.E. Finance

Panel of Recognized International Market Experts in Finance

Some legal issues on Blockchain, Virtual Currency and Smart Contract



Presentation by Tetsuo Morishita
2017 P.R.I.M.E. Finance Annual Conference
23 & 24 January, Peace Palace, The Hague

Blockchain in Financial Markets

- Distributed Ledger Technology
 - Permissioned (Closed)
 - Permissionless (Open)
- Distributed Record Keeping
- Settlement and Payment without intermediaries
- Virtual Currencies
- Smart Contracts

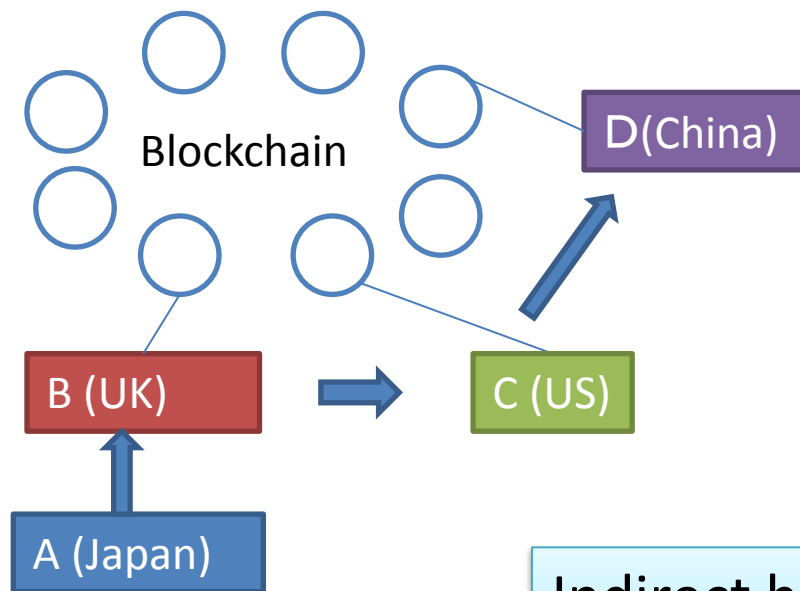


Legal Nature of Virtual Currency

- Bitcoin: Intangible, no issuer, recorded on Blockchain
- What is the legal nature of virtual currencies and various transactions (sales, deposit, security, loan, swap) of virtual currencies?
- Financial Markets Law Committee's discussion paper in 2016: "virtual chose in possession"
- Tokyo District Court Judgement (Aug.5, 2015) : No ownership exist on bitcoin.
- Blockchain: Technology to record intangible value and make it easier to trade such value.
 - The need to develop legal theories to handle various digital values appropriately



Applicable Law



A held a virtual asset through B and B went bankrupt. Who is the owner of the asset?
Could A get recovery of the Asset?

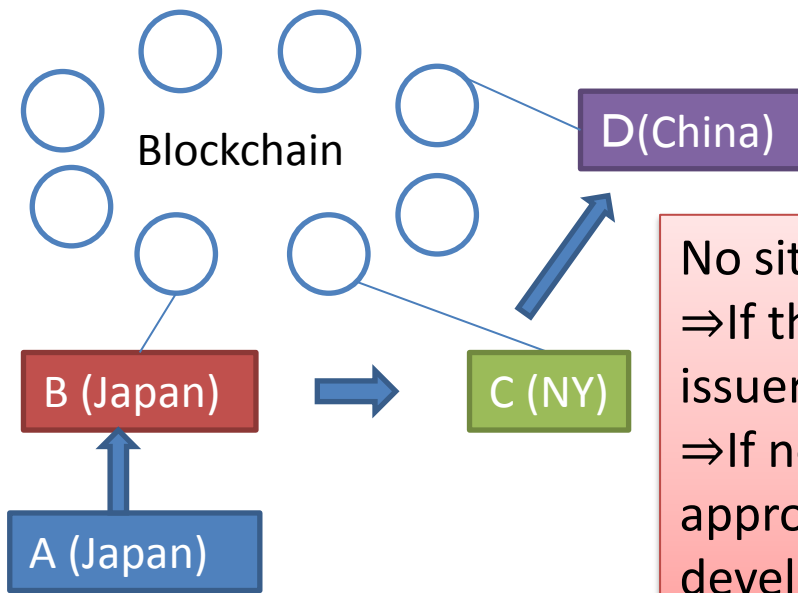
Traditional rules of private international law: property law issue should be governed by law of the place where the subject is situated (*lex rei sitae*)

Indirect holding: PRIMA Approach?
Direct Holding: ?



P.R.I.M.E. FINANCE
Panel of Recognised International Market Experts in Finance

Applicable Law



B directly held virtual asset recorded on Blockchain, but C stole B's asset, then C transferred the asset to D who is in good faith.

No situs, no intermediary

⇒ If the asset is debt, the law of the location of issuer or the governing law of the debt

⇒ If not, traditional approach would not be appropriate and a new approach should be developed

Permissioned (closed) Blockchain:

- Law agreed by parties, if any
- Law of the location of the administrator, if any

Permissionless (Open) Blockchain:

- Application of the governing law of contract to proprietary aspects between contract parties
- The law of the location of the party against whom property right is asserted

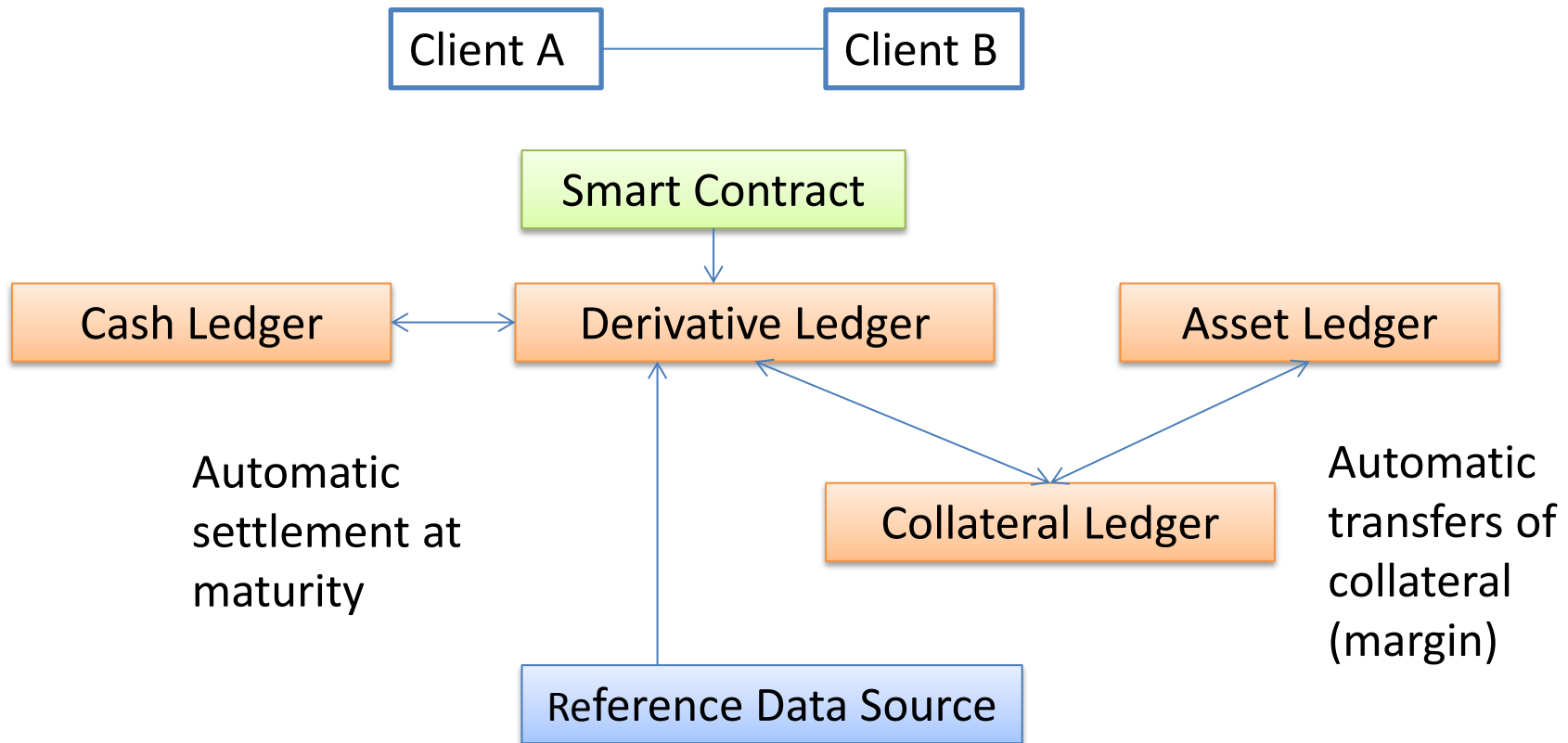
Smart Contract

- Smart Contract
 - computer protocols that record the terms of a contractual agreement and can be stored in an indelible, immutable blockchain so that, once agreed, they can be left to “self-execute””
(Euroclear & Slaughter and May, Blockchain Settlement, Nov. 2016, at 8)



Smart Contract

- automatic calculation of exposures
- automatic call for additional collateral
- automatic settlement at maturity.



see, Oliver Wyman and Euroclear, Blockchain in Capital Markets (Feb. 2016), at 11.



PRIME.FINANCE
Panel of Recognised International Market Experts in Finance

Smart Contract

- Some key features
 - automatic performance/ no non-performance (\Leftrightarrow possible non-performance)
 - no enforcement cost (\Leftrightarrow In case of non-performance, enforcement by lengthy or expensive legal procedure is necessary)
 - zero tolerance, no flexibility (\Leftrightarrow various exceptional situations)
 - clear and unambiguous (\Leftrightarrow intentionally ambiguous)
 - possibility of bugs/ imperfect programming (\Leftrightarrow possible errors)



Smart Contract

- Smart contract and law of contract
 - Code is law?
 - a tool for parties to perform their obligations
 - Need for legal review and intervention if necessary
 - the outcomes of the automated process must meet parties' intention
 - Need for some emergency stop device
 - regulations, force majeure, fraud, bugs, imperfect programming...
- How could law intervene?

