Limits and potentialities of DLT in the trading and post trading industry

Emilio Barucci

Daniele Marazzina

Politecnico di Milano

Outline

1. Key issues
2. Potentialities in the trading industry
3. Potentialities in the post trading industry
4. Experiences
5. Conclusions

Three domains:

- Trading
- Post trading
- Other services: servicing, reporting

1. Key issues:

- Restricted-unrestricted DLT
- Tiered-egalitarian DLT (no central authority?)
- Blockchain type - consensus ledger type
- Proof of work, proof of stake, probabilistic validation
- Money on the ledger
- Integrity/immutability/legacy
- Interoperability
- Transparency/privacy

2. Potentialities in the trading industry

- DLT technology is not a market place, it is a register

- It is difficult to perceive how it can help to match demand and supply

- Smart contract may perform the task

- DLT doesn't provide liquidity, price discovery. What about smart contracts?

- DLT may help to organize OTC markets

- DLT has some atout: transparency, certainty

- ICOs

- Retail investors: KYC, antimoney laundering

3. DLT and post-trading

Three scenarios:

- DLT for stocks not registered at a central secutity depository (CSD): national regulation, it is not necessary to build securities e issuance accounts, instantaneous settlement
- DLT as internalized system for listed stocks: few constraints from the CSDR
- DLT as securities settlement system for stocks placed on a CSD: strong constraints

Four moments/function:

- Register
- Finalization of trade
- Settlment-reconciliation
- Collateral management

Third scenario

- Role of the authority: validation of transactions by the CSD (tiered DLT)?

- Restricted DLT, role of the CSD: outsourcing issues, KYC and antimoney laundering.

- When a contract is finalized? Settlement finality: moment of entry of the transfer order, moment of irrevocability of the transfer order, irrevocability of settlement. (validation issue, immutability). Anonymity.

- Notarization/reconciliation with the issuance of the asset (Integrity/immutability:)

- Technical standard ISO 200022, cryptographic componet, to be a digital asset

- Interoperability tra DLT e tra DLT e altri sistemi

- Delivery versus Payment: Central bank money, Commercial bank money (restricted DLT), counterparty risk, money on the ledger

- Collateral management through smart contracts in OTC markets

Settlement and other services

- Settlement failure: restricted DLT
- Instantaneous Settlement: tradeoff counterparty risk/liquidity-netting
- Smart contracts: collateral management, securities lending, corporate actions. Standardization is necessary
- Registration of tarde, settlement, collateral management may involve several DLT
- Other services: servicing, reporting (role of the aturhority)

4. Market experience:

- French case

- ICOs: more than 1.2 raised by 250 campaign between 2014 al 2017. Warning of ISDA on risks.

- Central Bank of India: beta on smart contract, "blockchain-based know-your-customer (KYC)". Consortium built by 27 banks.

- Equity swap markets among financial isntitutions (JPMorgan Chase, Goldman Sachs, BNP, Credit Suisse, Citi). AxCore platform.

- Singapore-Hong Kong Blockchain Trade Network.

- Nasdaq: proposal to exchange assets through DLT.

5. Conclusions

- Forget bitcoin-blockchain?
- Is going to be a new way to organize the financial industry?
1. Cost saving
2. Reliability
3. Regulation
4. Interoperability
- Can we do the same things in a more secure and less expensive way?
- What will be the legacy?