Blockchain Technology and the Financial System: Legal and Regulatory Issues

Presentation to the Financial Markets Lawyers Group

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Review of Essentials of the Blockchain

- Bitcoin and blockchain
- Bitcoin blockchain vs. other forms of distributed ledger technology
  - Scalability
  - Mining
  - Compensation
March 29, 2016: DTCC and Digital Asset Holdings announced they will create a “proof of concept” for a blockchain that would facilitate clearing and settlement of repo trades.

January 22, 2016: ASX announced it selected Digital Asset Holdings to create a blockchain for clearing and settlement of cash equities.
Other companies and groups that have announced development of financial system blockchains

Other financial market intermediaries that have announced that they are exploring blockchain solutions
Current Commercial Issues

- Public (unpermissioned, trustless) blockchain vs. private (permissioned, trusted) blockchain
- “Ground up” building vs. integration with existing systems
- Interoperability of blockchains
- “Chicken and egg” problem: Capital expenditures and regulatory approval
- Latency and energy efficiency
- Settlement Time: Is instantaneous settlement desirable in all cases?
- Desirability of CCPs if settlement and clearing is automated on blockchain
Current Legal Issues

• “Smart contract” technology
  o Digital transactions
  o Self-executing
  o Recording
  o Settlement
  o Exchange of payments
  o Margin
  o Terms
• Dispute resolution
  o Countervailing transactions
• Intellectual property
  o Open-source?
  o Licensing or owning?
• Consolidation
Current Regulatory Issues

• “Chicken and egg” problem: Capital expenditures and regulatory approval
  o March 2016 OCC paper on Supporting Responsible Innovation in the Federal Banking System
  o February 23, 2016 CFTC Technology Advisory Committee meeting on the blockchain and the potential application of distributed ledger technology to the derivatives market

• AML/BSA/KYC
  o Pseudonymity
  o Transparency
    • To participants
    • To regulatory authorities

• Ability to correct transactions and smart contract data
  o Process for resolving disputes
Current Regulatory Issues

- Privacy
  - Transborder data flow
  - Partitioned ledgers
- Cybersecurity
- State licensing
  - Full faith and credit
  - State vs. federal jurisdiction
- Recordkeeping regulations
- Dodd-Frank Act Title VII
- CCPs under Dodd-Frank Act Title VIII
Regulatory Issues: Recent Developments

- March 2016: OCC paper on Supporting Responsible Innovation in the Federal Banking System
- February 2016: IOSCO Board discussion of blockchain: Board “agreed on further research” regarding opportunities and risks
- February 23, 2016: CFTC Technology Advisory Committee meeting on the blockchain and the potential application of distributed ledger technology to the derivatives market
- February 22, 2016: FSB letter to G20 Finance Ministers and Central Bank Governors on its evaluation of “financial technology innovation” and desire to “manage any systemic risks ... without stifling innovation”
- February 22, 2016: FCA, during London Fintech Week, statement that it is monitoring blockchain and that the technology needs “space” to grow
Regulatory Issues: Recent Developments

- January 2016: DTCC white paper on potential of blockchain technology
- November 9, 2016: New York State Department of Financial Services letter to financial regulatory authorities concerning potential new cybersecurity regulations
- CFTC Enforcement Actions
  - September 17, 2015: Coinflip order (Virtual currencies are commodities)
  - September 24, 2015: Tera order (CEA applies to bitcoin swaps)
- June 3, 2015: New York State Department of Financial Services issuance of “BitLicense” framework for regulating virtual currency activity