FINANCIAL TECHNOLOGY
FINTECH
SOCIAL BENEFIT AND LEGAL AND REGULATORY CHALLENGE
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FINANCIAL TECHNOLOGY (FINTECH) AND FINANCIAL FUTURE

FINANCIAL TECHNOLOGY
(FINTECH)
A NEW WORLD, A NEW FUTURE
FINANCIAL TECHNOLOGY (FINTECH) AND FINANCIAL FUTURE

FINANCIAL TECHNOLOGY (FINTECH) LAW [JOE I]

(1) FINTECH MARKET MEANING, DEFINITION & NATURE
(2) FINTECH MARKET STRUCTURE AND OPERATIONS
(3) BITCOIN AND DISTRIBUTED LEDGER TECHNOLOGY
(4) FINTECH ADVANTAGE AND DISADVANTAGE
(5) FINTECH COMMENT, CONCLUSIONS AND FUTURE
WHAT IS FINTECH?
FINANCIAL TECHNOLOGY (FINTECH) AND FINANCIAL FUTURE

FINANCIAL TECHNOLOGY (FINTECH) LAW

(1) DIGITAL INFORMATION AND INFORMATION LAW
(2) DIGITAL RIGHTS, ASSETS AND CLAIMS
(3) DIGITAL IDENTITY, EXECUTION AND LIABILITY
(4) DIGITAL RISK, REGULATION AND OVERSIGHT
(5) PRIVATE AND PUBLIC INTERNATIONAL DIGITAL LAW
FinTech

- Software that provides financial services
- Disrupt incumbent financial systems and corporations
- Disruption: channel, agile new entrant, business model
FinTech History

1. FinTech 1.0  
   Day to Day technical functions

2. FinTech 2.0  
   Digitalisation and Computer and Telecommunications Advance

3. FinTech 3.0  
   Disruptors & Disintermediation

4. FinTech 4.0  
   Value Net

5. FinTech 5.0  
   Sensory or Immersive Net

‘Digitalisation, Mobilisation, Disintermediation, Personalisation and Democratisation’
Financial History

1. **Money**
   Coin (700BC), Notes (1640), Accounts (1700s), Reserves (1800s), Digital (1970s)

2. **Revolution**
   Agricultural (10,000BC), Commercial (12/1300-1700s), Scientific (1500s), Financial (16/1700s), Industrial 1&2 (1700s 7 1800s)

3. **Info Tech**
   Information, Digitalisation, PC, Mobile, wwWeb

4. **Finance**
   Finance 1.0 (models & assumptions) and Finance 2.0 (FinTech)

5. **Economics**
   Economics 1.0 (traditional) and Economics 2.0 (heterodox)

FinTech forms only one part larger Digital, Information, Technological, Financial and Social Revolution
Three developments indicating the future of payments

Fintech Rising
1. DIGITAL INFORMATION

What is information in law? Data? Knowledge? Ideas?
Fact, opinion or law. Processed. Applied. Mental Representations.
Information is not property but can attract legal protection

(1) Private information and data privacy    Negative Private
(2) Public information and data disclosure   Positive Public
(3) Intellectual property information        Creative addition
(4) Aggregate information and data protection
(5) Innovation, competition and social balance

Necessary protect against ‘Information Feudalism’ and ‘Tech Servitude’
What are Legal Rights, Digital Rights, Property? Ledgers? Money?

(1) **Legal Rights, Assets and Claims**  All law rights based

(2) **Digital Rights and Asset Classification**  Property definition
   ‘Identification, Separation, Permanence, Independence & Attachability’
   ‘Hold, Encumber, Bequest, Transfer (Gift or Sale), Destroy’

(3) **Digital Ledgers**  Conversion and Origin Rights

(4) **Digital Rights and Title Transfer**  Record and Title Ledgers

(5) **Money and Tender Status**  No denomination and state issue
3. DIGITAL IDENTITY

Series issues online Contract Formation and Legal Validity

(1) **Digital Identification** Multiple Digital Identities and Legal Effect

(2) **Digital Viability & Validity** ID, confirm, assume, complete, execute

(3) **Digital Signature and Execution** Simple and Advanced Sigs

(4) **Digital Liability** ‘International Public (Order) Law’

Scope of Criminal and Public Order Laws. New ‘Targeting Theory’

(5) **Digital Cross-border Resolution and Enforcement**

Online Digital Dispute Resolution (DDR or TDR)
4. DIGITAL RISK & REGULATION

Technological and Aggregate Risk Increase. Model Design, Software, Hardware, Network, System

(1) FinTech and FinRisk RegTech, SuperTech
(2) RegTech and RegTech ResTech, SupTech
(3) Financial Technology Response and Total FinReg
(4) Digital Systemic Instability and MacroTech MacroTech
(5) Global Markets and InterFinReg
1. Financial Risk  Credit, Market, Interest, FX, Derivatives
2. Operational  Fraud, Personnel, Systems, Transaction, Completion
3. Legal  ‘Technology Risk’  (1)  Technology Risk Model
       Capacity, Doc Validity, Enforce, Liability, Insolvency  (2)  Component Complexity
4. Conduct & Management  Fragmentation  (3)  Software Sensitivity
       Conduct, Governance, Ethics, Reputation, Group,  (4)  Network Complexity
5. Environmental  (5)  Aggregate & Systemic
       Political, Social, Natural, Direct & Indirect Environment  Complex Causation

‘Technological Emergence and Systemic Risk’
FinTech regulation has to correct all of earlier crisis failures and new threats and exposures

1. Regulation
   - Basel III ad, Perimeter, TechGov, Connections, Acquisitions
2. Supervision
   - TEP, MicroTech, Tech Reviews, & Tech Committees/Colleges
3. Resolution
   - TRPs & TTRs (TMGs) & Technical SRR powers
4. Support
   - TLR & extended LLR (GSITPs or GSITIs)
5. Oversight
   - MacroTech oversight, techData, techAnalysis, techPowers, Technological Systemic Risk awareness

Savings, Lending, Payment, Investment, and Risk Management
5. INTERNATIONAL DIGITAL LAW

(1) Law, Regulation and Coding Lawrence Lessig. CCC Coding
(2) Digital Dispute Resolution (DDR) Virtual Communities
(3) International Private Law and Digital Situs PREMA
(4) Public International Law and Digital Monetary Sovereignty Complex and Layered and Diffuse Sovereignty
(5) Digital Governance and Technological Self-regulation (SelfReg or MarReg) New ‘Code World’ or ‘Code Society’
FINTECH CONCLUSIONS

1. We live in exciting times of significant evolution although FinTech forms only one part of larger post-crisis Digital, Technological, Virtual and Social Revolutions that are taking place.

2. FinTech has to be considered inclusively to cover all aspects of technological competition, development, assumption, acquisition, absorption and reform.

3. Expect further substantial Experimentation and Innovation to follow with corresponding significant market, consumer and social benefits.

4. This has nevertheless to be supported by parallel supervisory and regulatory change and evolution with RegTech although this has to be extended to cover all relevant risks and exposures with full TechReg and FinReg.

5. Massive market and supervisory Disruption is possibly inevitable although this only represents acceleration or bringing forward of necessary banking and financial market restructuring and reform with consequential benefits provided all relevant sources of instability are properly identified and managed.