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

Eruption of Disruption: The FinTech Future

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P.R.I.M.E. Finance Annual Conference 2018
22 & 23 January, Peace Palace, The Hague

* The views expressed are those of the author and do not necessarily reflect those of the ECB
Digital innovations and the financial sector

• Virtual («crypto») currencies were at the forefront of recent technological developments
⇒ Separation of assets (e.g. Bitcoin) and technology (e.g. Blockchain)

• Potential to induce change across the value chain
  – Payments, clearing and settlement
  – Data and identity management as well as regulatory reporting
  – Holding and transfer of assets, record of ownership and asset services

• The emergence of new technologies triggered reflections how payment, clearing and settlement arrangements are designed

• Distributed ledger technology and digital currencies are a focal point of attention by financial market participants, academics, authorities and central banks
Potential implications for markets and regulators

• **Various possible scenarios** (ranging from *incremental usage* of new technology to improve internal efficiency, *disintermediation* by start-ups/peer-to-peer networks, market-entry of bigtechs to *cooperation models*)

• **Pressure on business models, risk management and supervision**
  – Challenges to the intermediary function of financial institutions
  – Market entry of new (unregulated) entities

⇒ Existing **legislation and regulation may be affected**
  – requirements to *use specific types of FMIs and access points* (eg banks)
  – operational and prudential requirements for **regulated entities**

⇒ **Regulatory responses** vary from *warnings, prohibitions, entity specific* regulation (eg for wallet providers, exchange platforms), targeted *fintech* regulation (eg for privately issued securities) to *accommodation* (eg sandboxes)

⇒ **Regulators to adapt own frameworks** for data access and reporting («RegTech», «SupTech»)
Focus of regulatory bodies

Assessment of need for new regulatory standards

First nucleus: CPMI analytical framework (February 2017)

• Guidance on understanding arrangements (functionality and nature of arrangement, key factors for an effective implementation)

• Potential implications for efficiency, safety and broader financial markets

<table>
<thead>
<tr>
<th>Efficiency</th>
<th>Safety</th>
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<tbody>
<tr>
<td>Speed of end-to-end settlement</td>
<td>Operational and security risk (cyber)</td>
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<tr>
<td>Costs of processing</td>
<td>Settlement issues (finality)</td>
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<tr>
<td>Reconciliation (transparency)</td>
<td>Legal risk</td>
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<tr>
<td>Credit and liquidity management</td>
<td>Governance</td>
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<tr>
<td>Automated contract tools</td>
<td>Data management and protection</td>
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Broader financial market implications

- Connectivity issues and standards development
- Financial market architecture (actors, markets, regulators)
- Broader financial market risks (micro- and macro-level)
Some key issues for further evolution of DLT

- **Re-intermediatisation** (Regulatory compliance, control of access)
- **Network effects** (Fragmentation, technical standardisation)
- **Process integration** (DvP, Nexus to central bank money)
- **Governance** (setting the rules/protocols, access, risk management)
- **Regulatory compliance** (KYC duties, AML, consumer protection, data secrecy and privacy rules)
- **Legal issues**
  - Nature of digitised assets, legal status of a ledger
  - Identification and authentication of users
  - Finality of the records/balances
  - Liability, applicable law, jurisdiction and enforceability
Implications for central banks

Operational perspective
• Relevance for efficient and safe central bank payments and settlement services
• Impact on monetary operations and central bank money issuance

Catalyst/policy perspective
• Supporting market efficiency through DvP/PvP in central bank money
• Need for standardisation and interoperability, countering fragmentation

Oversight, supervisory and financial stability role
• Impact on overseen/supervised entities and their business models as well as on the financial markets at large
## Digital currency - a taxonomy

<table>
<thead>
<tr>
<th></th>
<th>Physical currency</th>
<th>Digital deposits</th>
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<tbody>
<tr>
<td>Central bank</td>
<td>Cash (eg banknotes)</td>
<td>Digital currency</td>
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<td>Central bank digital currencies</td>
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<td></td>
<td></td>
<td>Central bank deposits (eg settlement and reserve accounts)</td>
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<tr>
<td>Commercial bank</td>
<td>Commercial bank notes</td>
<td>Commercial bank digital currencies</td>
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<tr>
<td></td>
<td></td>
<td>Commercial bank deposits (eg transaction accounts)</td>
</tr>
<tr>
<td>Other</td>
<td>Other issued notes and commodities</td>
<td>Private digital currencies (eg bitcoin)</td>
</tr>
<tr>
<td>(including non-bank entities and no issuers)</td>
<td></td>
<td>Non-bank accounts and stored-value records (eg broker-dealer accounts)</td>
</tr>
</tbody>
</table>
Digital currencies - implications and risks

• Technical
  – Degree of robustness of possible technologies, cyber risks
  – Standardisation and reference architecture

• Economic
  – Monetary policy impact (lower bounds) and financial stability
  – Impact on bank business models (bank deposits, credit provision)
  – Cost-benefits and acceptance by users

• Regulatory and policy
  – Private sector vs. public sector action
  – Regulatory compliance, tax and privacy considerations

• Legal
  – Legal qualification (discharge of obligations, liability, legal tender, …)
  – Tax and accounting treatment