Blockchain and Distributed Ledger Technologies: An EU Policy Perspective

ITU Workshop on "Security aspects of blockchain"
21 March 2017
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Agenda

- Digital Single Market - ICT Standards priorities
- Blockchain and financial markets
- European Parliament contributions
- The FinTech Task Force
- Application areas for blockchain
- EU initiatives
Report on Single Market Integration and Competitiveness in the EU and its Member States

Context: a deeper and fairer Single Market

- Single Market Strategy
- Trade for All Communication
- Capital Markets Union
- Digital Single Market
- Energy Union
- EFSI

Consumers
Innovation
Delivery

Report on Single Market Integration and Competitiveness in the EU and its Member States
... Delivering on the DSM Strategy

'19 April 2016 Package'

first industry-related package under the DSM Market strategy

set of coherent policy measures aiming at the digital transformations of our industries and at maximising their impact on economic growth
1ST PILLAR: PRIORITY SETTING

- Key building blocks for DSM identified: 5G, cloud computing, IoT, (big) data, cyber-security
- Will benefit application areas (eHealth, smart energy and cities, ITS / connected & automated vehicles, advanced manufacturing, ...)
- For each: clear deliverable with deadline and who does what

⇒ clear set of detailed priorities & list of tasks
⇒ Involvement of ESO, SDOs & MSP is key!
Blockchain: where did it start?

• With virtual currencies and their disruptive potential on financial markets
• Bitcoin was introduced on 31 October 2008 by Satoshi Nakamoto, never identified
• Released as open sources software, based on distributed ledger technology
• Many other virtual currencies launched since then
• Total market cap in billion€
## Virtual Currencies, a growing market cap

<table>
<thead>
<tr>
<th>#</th>
<th>NAME</th>
<th>MARKET CAP</th>
<th>PRICE</th>
<th>AVAILABLE SUPPLY</th>
<th>24H VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bitcoin</td>
<td>€12,160,200,711</td>
<td>€757.56</td>
<td>16,051,737 BTC</td>
<td>€63,107,631</td>
</tr>
<tr>
<td>2</td>
<td>Ethereum</td>
<td>€644,327,048</td>
<td>€7.40</td>
<td>87,069,625 ETH</td>
<td>€5,441,894</td>
</tr>
<tr>
<td>3</td>
<td>Ripple</td>
<td>€224,786,519</td>
<td>€0.006280</td>
<td>35,794,578,423 XRP *</td>
<td>€1,044,937</td>
</tr>
<tr>
<td>4</td>
<td>Litecoin</td>
<td>€171,001,165</td>
<td>€3.49</td>
<td>48,945,629 LTC</td>
<td>€1,761,291</td>
</tr>
<tr>
<td>5</td>
<td>Monero</td>
<td>€110,520,197</td>
<td>€8.14</td>
<td>13,578,448 XMR</td>
<td>€1,245,401</td>
</tr>
<tr>
<td>6</td>
<td>Ethereum Classic</td>
<td>€94,860,230</td>
<td>€1.09</td>
<td>87,006,731 ETC</td>
<td>€1,850,336</td>
</tr>
<tr>
<td>7</td>
<td>Dash</td>
<td>€67,927,243</td>
<td>€9.75</td>
<td>6,964,271 DASH</td>
<td>€1,883,521</td>
</tr>
<tr>
<td>8</td>
<td>MaidSafeCoin</td>
<td>€39,647,454</td>
<td>€0.087609</td>
<td>452,552,412 MAID *</td>
<td>€198,127</td>
</tr>
<tr>
<td>9</td>
<td>Steem</td>
<td>€35,196,788</td>
<td>€0.154010</td>
<td>228,535,972 STEEM</td>
<td>€55,447</td>
</tr>
<tr>
<td>10</td>
<td>NEM</td>
<td>€33,037,529</td>
<td>€0.003671</td>
<td>8,999,999,999 XEM *</td>
<td>€95,071</td>
</tr>
<tr>
<td>11</td>
<td>Augur</td>
<td>€31,931,831</td>
<td>€2.90</td>
<td>11,000,000 REP *</td>
<td>€154,998</td>
</tr>
</tbody>
</table>
European Parliament resolution of 26 May 2016 on virtual currencies

- Opportunities and risks of VCs and DLT in the rapidly evolving technological landscape of payments
- Potential impact on monetary policy, VCs' volatility
- Employing DLT beyond payment
  - Clearing, settlement and other post-trade management processes, bank reconciliation...
  - And beyond the financial sector...
  - Encourages government agencies to test DLT systems
- Smart regulation towards fostering innovation and safeguarding integrity:
  - Proportionate regulatory approach at EU level – Not to stifle innovation
  - Calls for the creation of a horizontal Task Force DLT
EU Parliament draft report on the influence of technology on the future of the financial sector

- **Which technologies?** DLT, Artificial Intelligence, and Cloud
- **Drawing an EU framework for FinTech**
  - Draw up a Fintech action plan
  - Legislation in the financial domain should be proportionate and according to
    - The innovation principle
    - Same service and risk, same rule.
    - Technological neutrality
  - Recommends controlled experimentation by authorities
  - RegTech potential to alleviate compliance processes
European Supervisory Authorities

- **European Central Bank**
  - Adopting existing standards

- **European Bank Authority**
  - Prudential regulation and supervision across the European banking sector
  - To perform these tasks, the EBA can produce a number of regulatory and non regulatory documents including binding *Technical Standards*, *Guidelines*, Recommendations, Opinions and ad-hoc or regular reports

- **European Securities and Market Authority (ESMA)**
  - is issuing guidelines and technical standards which should be followed by the industry

- **European Insurance and Occupational Pensions Authority**
  - developing technical standards to implement different legislations related to the insurance sector
EP draft report (2)

- **Cyber security and ICT risks**
  - Need for end-to-end security across the whole financial services
  - ESAs to regularly review operational standards
  - Need for information sharing between ESAs and market participants
  - Concerns about unlawful use of blockchain, for example through bitcoins
  - Need for better education and awareness for citizens and businesses
FinTech task Force

- **Work Stream on blockchain**
  - Creation of a blockchain observatory (beyond FS)
- **Work Stream on interoperability and standards**
  - FinTech included in the ICT standards rolling plan
  - Need for a cartography of FinTech standards
  - Need for cooperation between stakeholders
    - SDOs (ISO TC68, ISO TC307, ITU, ETSI,...)
    - European Supervisory Authorities (EBA, ESMA, EIOPA)
    - Banks, Insurances
    - New players (payment, RegTech, lending, financing, etc...)
- **Need for coordinating EU initiatives**
- **Launch of a public consultation**
Potential applications of Blockchain

- Energy
- FinTech
- eHealth
- eGov
- Copyright
EU initiatives: blockchain observatory

- Launch of a hub to access, share and disseminate knowledge on BC/DLT, with objectives to
  - Mapping existing initiatives (PoC), knowledge sharing
  - Monitor development around BC/DLT
  - Develop expertise
  - Community building
  - Address sectoral and cross cutting issues (governance, scalability, compliance, interoperability…)
  - Inputs / recommendations for EU policies / actions
EU initiative: interoperability and standards

- *Included in the ICT standardisation rolling plan*
- *Develop cartography of FinTech*
- *Launch a specific study on blockchain standardisation*
- *Organise cooperation workshop between standardisation stakeholders*
- *Identify priority use cases for piloting*
- *Financial Data Standards project*
EU initiatives: technology watch and analysis

• **Studies and analysis**
  - DLT and cybersecurity
  - Virtual currencies
  - DLT and securities market
EU Initiatives: piloting, research and innovation

- **Pilot a DLT-based European Financial Transparency Gateway**
- **H2020 Research and Innovation Projects:**
  - *Decode* – distributed and privacy-aware architecture for decentralised data governance and federated identities
  - *My Health My Data* – eHealth, eHR