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BLOCKCHAIN BASED SERVICES: PRACTICAL EXPERIENCE
INTRO

• Blockchain lab found in 2015
• Hyperledger project members since 2016
• 9 blockchain projects done (from consulting and mentorship to pilot products)
• Only Russian company listed in Forbes Blockchain 50’2020
BLOCKCHAIN: EXPECTATIONS AND REALITY

It’s promised to disrupt intermediaries, reduce reconciliation costs and increase quality of asset services

According to IBM, in 2024 total volume of investments in blockchain based solution will be over $60 billion, added in 230% each year.

There is a lot of businesses trailing blockchain, but success rate of projects is still low

Only 4% from 398

Were successfully finished

Nevertheless, everyone is trying to effectively cope with technological requirements and find the benefits of use.

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* Blockchain Market Shares, Market Strategies, and Market Forecasts, 2018 to 2024
  WinterGreen Research for IBM, 2018

** Market Guide for Blockchain Consulting and Proof-of-Concept Development Services. Gartner, 2018
BONDS ON BLOCKCHAIN – BENEFITS?

- Transition from workflow coding to coding of relationships between participants
- Guaranteed atomicity of transactions without involving a third party – using technology
- Elimination of information desynchronization risks – a single data source and the ability to integrate with document exchange
- Acceleration of business processes in those places where paper workflow is present

SMART CONTRACT “BONDS ISSUE”
- Opening and maintaining accounts
- Transactions
- Execution of operations “Delivery Versus Payment”
- Reports

SMART CONTRACT “DVP CALCULATIONS IN RUBLES”
- Cash account transactions
- Automation of reconciliation and confirmation of orders
- Execution of operations “Delivery Versus Payment”
THREE PARTY REPO – BENEFITS?

SMART CONTRACT
“REPO TRANSACTION”

- REPO transaction life cycle
- Calculation of liabilities for the 1st and 2nd part of repos
- Calculation of margin requirements and accrual%

1. Platform service
2. Making a deal via smart-contract
3. Execution of a smart contract under the regulations
4. Submission of data (oracle)
5. Fulfillment of liabilities (transfer of assets)

1. Platform service
2. Making a deal via smart-contract

• Checking the Disintermediation Hypothesis
• Integration with centralized NSD systems
• Preparation of a legal framework for working with tokenized liabilities
DISTRIBUTED DEPOSITORY – BENEFITS?

- Lower operating costs through a single distributed registry of accounts
- Standard interfaces
- Opportunity to regulate the market online by imposing rules directly on the acceptance of operations by a distributed registry
COMMODITY MARKET – BENEFITS?

- Integration of supply chain management and trading / settlement functionality
- Full transparency and traceability
- Unified document exchange
- Ability to create international trading platforms
STANDARDS/WORKING GROUP EXPERIENCE

ISSA WORKING GROUP

• "Crypto Assets «Issuance, settlement, servicing, safekeeping and operational infrastructure» (TBD Sep, 2019)
• "Infrastructure for Crypto-Assets: A Review by Infrastructure Providers" (10/2018) > PDF 787 kB
• "Distributed Ledger Technology - Principles for Industry-Wide Acceptance", v1.0 (06/2018) > PDF 1.2 MB
• "General Meeting Proxy Voting on Distributed Ledger"; Product Requirements v2.1 (11/2017) > PDF 685 kB
• Cross-Reference Table aligning the Proxy Voting DLT solution with ISO 20 (11/2017) > PDF 395 kB

ISO COMMITTEE

• STANDARDS BY ISO/TC 307 “Blockchain and distributed ledger technologies”

SWIFT

• ISO20022 DLT Edition (SWIFT)

TECHNOLGY HARMONIZATION

• Hyperledger Working Groups (TSC, Architecture, Performance & Scalability, etc)
OPERATOR OF BLOCKCHAIN REGISTRY – WHY WE NEED IT?

KEY FUNCTIONS

- ensuring the reliability and security of the platform for the possibility of deploying financial services on it
- setting of unified rules of make a legal basis
- stimulating the technological development of the platform and building up its functionality
- scalability

REQUIREMENTS

- neutrality with respect to the services and operations of participants
- sustainability, self-sufficiency, long-term development strategy
- high level of business continuity, cybersecurity, corporate governance
- financial responsibility
HOW TO CHOOSE BLOCKCHAIN IN RIGHT WAY?

**Requirements**
- New service
- Multiple participants
- Shared data objects
- Joint actions with these objects

Local automation already exists (participants already have systems in which they can add new data objects)?

- Yes
- No

Participants face cloud automation restrictions (commercial secrets and/or legal restrictions)?

- Yes
- No

Cloud to be used
- Perfect for the organizer: maximum value, minimum implementation and change costs
- Requires compromises in terms of security, privacy, and operational risks

Blockchain to be used
- It is close to a cloud-based solution in terms of costs
- More flexible in terms of data handling and downstream integration
- Lower operational risks (no dependence on a cloud provider)

Is Total Cost of Ownership (TCO) of local system improvements and integration on a participant’s side higher for the participant than subscription for outsourcing?

- Yes
- No

Can restrictions be removed by a DLT solution?

- Yes
- No

Improvement of local multi-product systems with integration via messaging systems to be used
- Perfect solution if changes are minimal
- It can be very expensive due to constant deterioration of multi-product systems and high integration costs in the long run
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THANK YOU!
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