FinTech

Brief Glossary

Financial Technology Development Consortium

a non-profit organization (association) which includes the Bank of Russia and the largest financial market participants. The main objectives of the Consortium is joint research and application of innovative technologies with a view to developing new financial products and services.

Distributed Ledger Technology (PP)

a counterparts interaction technology (in this case, such interaction involves the exchange of information and/or asset) in which:

* each party has access to the entire transaction history — to the registry (ledger) tracing the history of same interaction;
* a member can have a full copy of the registry — i.e., the registers (ledgers) are distributed;
* registers (ledgers) of all participants are totally identical;
* all registers (ledgers) of participants are synchronized automatically on the basis of Protocol for achieving distributed consensus, but not through the actions of a Central Counterparty (CCP).

Blockchain

an option for the implementation of Distributed Ledger System (Network) in which all data pertinent to the executed transaction is structured in the form of a chain (sequence) of related transaction blocks.

Masterchain

a new tool of interaction for financial market participants that uses the Distributed Ledger Technology. It allows rapidly confirming the relevance of data concerning the customer or transaction, and quickly offering a variety of financial services. This enables the financial market participants to provide fundamentally new services and products to customers. In addition, Masterchain allows expediting the information exchange among counterparts and ensuring the appropriate level of confidence for conducting financial transactions.

Pilot System for Financial Messaging

a technical prototype used by the Bank of Russia and financial market participants for researching and confirming the basic properties of Distributed Ledger Technology. The prototype employs the Financial Messaging System functionality within a closed network of Distributed Ledgers. In such network there is no exchange in assets among the counterparts, but only in financial information.

Open API

a unified programming interface, in particular, that allows creating financial services with access to banking systems, where customer accounts are maintained. More generally, it unifies programming interfaces to allow interaction among the banking and FinTech systems, and make it possible to create integrated, seamless services in the Financial Market Ecosystem.

In the fall of 2015, the Second payment directive was adopted by the European Union (The Payment Services Directive 2 — PSD2). It has a mandatory effect on all providers and users of payment services within the EU. The Directive, in particular, requires banks to create an open API and provide access to third-party developers. It is expected that it will reduce time and costs associated with the development of new solutions, consumers will benefit from a wider range of tools and lower fees, and innovative companies can launch newer services without forging closer relationships with the banks.

Innovation Hubs

the organizational infrastructure set up for the maintenance and development of startups in the field of Innovative Technology Application. Basic functions include selection, acceleration and further support of promising business and technology projects on the Financial Market.

Regulatory Sandbox

a special set of rules and regulatory regimes which allows innovative companies to test their products and services in a controlled environment, without any risk of violating the financial laws. The "Sandbox" working conditions provide full or partial relief from certain regulatory requirements if the company does not go beyond the testing framework.

Virtualization

computational resources distribution technology allowing both consolidating the hardware capabilities of technical equipment in one pool, and distributing them for different tasks, services or users. The application of this technology allows optimizing the simultaneous work of computer equipment users. It also permits a flexible scaling of resources which are needed to perform certain tasks, and as a consequence, to reduce the cost of acquisition and operation of computers.

Cloud Technology

(the next stage of development of Virtualization Technology) remote access and data processing technologies in which computing resources (e.g. servers, applications, storage systems, etc.) are made available to users as an IT service (concept — as-a-Service: laaS — Infrastructure as a Service, PaaS — Platform as a Service, SaaS — Software as a Service, BPaaS — Business Process as a Service, etc.).

The computing equipment distribution providing for the "Cloud" operation among the appropriate IT services and users is based on Virtualization Technology.

Big Data

a set of approaches, tools and methods for processing structured and unstructured data of huge volume and significant diversity with a view to getting human-readable results which are effective under conditions of continuous growth and ensuring distribution across multiple nodes of computer network formed in the late 2000s as an alternative to traditional systems of database management and Business Intelligence category solutions.

Internet of Things

the concept of a computer network of physical objects ("things") equipped with embedded technology to interact with each other or with the external environment. It considers the set up of such networks as a phenomenon, capable of transforming the economic and social processes so that the human intervention in the actions and operations is partly excluded.

In the financial industry it allows obtaining fundamentally new data volumes for analysis, and also including physical objects directly in the category of constituent entities of the transaction. Thus, the car, for example, will be able to automatically pay tolls on the toll roads, at the gas station, etc.

Robotics

the process of replacing the intellectual and physical human activities with the actions of the Automation and Artificial Intelligence Systems.

With the development of Artificial Intelligence and Extensive Machine Learning there will be more opportunity of using computers for decision-making purposes in areas previously poorly amenable to automation due to the lack of clear decision-making rules.

In the Financial Sector, such segments as scoring, risk management, asset management, investment decision-making are the most promising in terms of Artificial Intelligence Application.

Artificial Intelligence (AI) and Interactive Technologies

technologies which allow implementing the systems based on complicated logic involving a possibility for self-learning and adjusting the initially installed algorithms. Functions that were traditionally considered to be the human prerogative, normally associated with decision making under conditions of limited or insufficient information, are referred to the Artificial Intelligence domain.

Virtual Reality Technology

a technology that allows creating real-world objects by technical means and pass them over to humans through the senses (sight, hearing, smell, etc.).

In the Financial Industry, Virtual Reality Technology allows reducing costs by minimizing the need to perform physical actions. For example, site assessment of pledge, inspection of the property at the time of concluding a mortgage contract.

Augmented Reality Technology

unlike Virtual Reality Technology, Augmented Reality Technology does not form an artificial world, but only contributes certain artificial elements to the perception of the real world.

In the Financial Sector, Augmented Reality Technology extends the capabilities of Virtual Reality Technology.