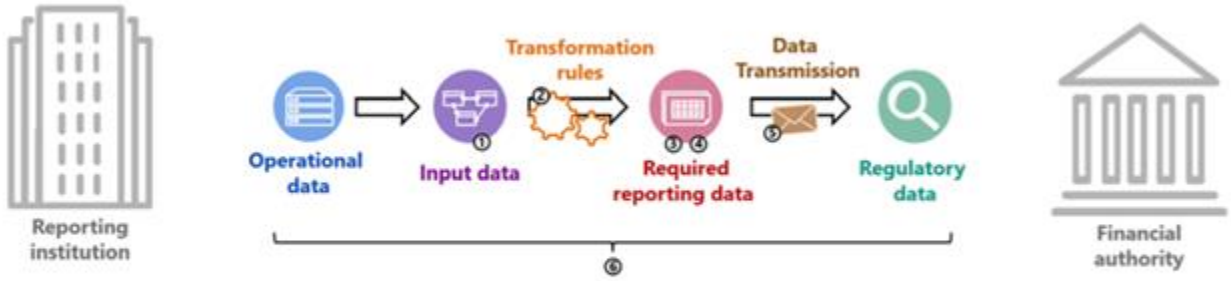
Shaping the Future of Capital Markets - Blockchain finance Israel, January 2022

Focal theme for the Hackathon: Use of blockchain technology to improve the efficiency of Transaction reporting and monitoring.

Common key points in the regulatory reporting process



① Innovations in terms of data standardisation. ② Innovations in transformation rules. ③ Innovations in the format of required reporting data. ④ Innovations in terms of granularity of required reporting data. ⑤ Innovations in the means of data transmission. ⑥ Innovations in terms of data access.

Origin of figure: Juan Carlos Crisanto, Katharina Kienecker, Jermy Prenio and Eileen Tan, From data reporting to data-sharing: how far can suptech and other innovations challenge the status quo of regulatory reporting? ,FSI Insights. 2018.

SupTech

It is required by law that Financial institutions, in Israel and around the world, to generate reports and submit them to different financial regulators in order to enable the latter to supervise the compliance of the companies with the regulatory requirements.

In recent years, there has been a growing interest on the part of financial institutions to leverage technological abilities to help them meet their regulatory requirements (known as RegTech), and by regulators to adopt new technologies to streamline supervisory work (known as SupTech).

The main motivation for promoting SupTech is to reduce the data reporting burden on the industry, increase the timeliness and quality of the collected data and improve their use for prudential decisions. For this theme, one direction to explore could be around monitoring of blockchain data to easily supervise the actions of participants, based on specific regulation.

Blockchain

For the past several years, blockchain has functioned as a foundation for initiatives by traditional financial entities such as international banks, securities stock exchanges and CSDs, in their efforts to devise optimal use cases for blockchain assimilation in the capital markets. Most efforts to use blockchain focus on the securities clearing and settlement phase in view of the technology's potential to simplify and streamline existing business processes whose complexity is primarily an outcome of indirect holding systems. The presumed assumption in this theme is that securities transactions will be settled using blockchain technology. Therefore, the question arises whether it is possible to adapt the existing processes and even improve them in relation to the transition to the use of blockchain.

Transaction reports

One example of a regulatory reporting duty is a Transaction report in which data is transmitted to the financial regulator that contains information on securities and derivatives transactions. Regulators use these reports to identify and rapidly analyze securities law violations.

In Israel, too, such reporting is transmitted in structured form between the Tel Aviv Stock Exchange and Israel Securities Authority. Future trading platforms are also required to submit similar reports.

In general, the transaction report characteristics are as follows:

1) The structure and format of the information are predetermined in formal rules.

2) The information transfer process is predetermined and aims to transfer information in a safe and standardized manner.

3) The information is compressed and transmitted outside the Financial companies' IT systems, to a secure external environment. Then they are transmitted by automated processes (push or pull) to the regulator's IT systems, going through ETL processes until it is loaded in the analytical environment of the regulator.

4) The information includes financial information on accounts. However, the information is limited to the purposes for which it is transmitted and does not include direct information about the account owners and their characteristics.

5) Current systems generate hundreds of Gigabytes of data every month.

6) The regulator uses analytical tools to analyze the data for tracking and trading anomaly detection. The algorithms, the running timing and the results are top secret components.

Challenges in the current process:

- **Duplicate processes** - Data in large volumes is processed and stored in two different places.
- **Security and cyber risks** - Transferring the data to an external environment, outside of the organizations, increases security and cyber risks.
- **Authenticity of the information** - the information is transmitted not at the time it is created in the supervised operating system and in any case undergoes formulation processes. Therefore, is not authentic information. In this context, it should be remembered that the Covid19 pandemic also reduced the ability to physically audit companies for the purpose of verifying information.

Suggested reading:

- Transaction reporting - **link**
- Guidelines Transaction reporting, order record keeping and clock synchronisation under MiFID II - **link**
- AUER, Raphael. Embedded supervision: **how to build regulation into blockchain finance. 2019.**
- CRISANTO, Juan Carlos, et al. From data reporting to data-sharing: how far can suptech and other innovations challenge the status quo of regulatory reporting?,**FSI Insights. 2018.**
- BEERMAN, Kenton; PRENIO, Jermy; ZAMIL, Raihan.Suptech tools for prudential supervision and their use during the pandemic, **FSI Insights. 2021.**
- FCA - Unlocking regulatory reporting TechSprint - **link**