CENTRAL BANK OF EGYPT
Egyptian Banking Institute

البنــك المركــزى المصــرى
المعهـد المصرفـى المصـرى

62.432

35.715

85.204

35.254

24.725

MAY 2024

SupTech

" **Supervisory Technology** "

12.751

Current
Trends

Defining the Concept:

Supervisory technology "SupTech", is a term used to describe the application of cutting-edge technology by regulatory bodies to enhance their supervision processes. It's a digital transformation of the regulatory and reporting procedures, enabling more effective and proactive risk and compliance monitoring in financial institutions. The term "SupTech" covers all innovative technologies that are utilized for financial supervision. This includes technologies like cloud computing and machine learning when they are used for supervisory purposes.

In conclusion, SupTech is revolutionizing the way financial institutions report and monitor risk and compliance. As technology continues to advance, SupTech is expected to evolve and become even more integral to the digital age.

Benefits of implementing SupTech in banking:

- **Real-Time Monitoring:** SupTech solutions offer real-time monitoring of financial service providers (FSPs), which can help supervisors to quickly identify and respond to emerging risks.

- **Advanced Risk Assessment:** SupTech can provide advanced risk assessment capabilities, enabling supervisors to better understand and manage the risks within the financial system.

- **Improved Compliance Management:** SupTech can improve compliance management by automating routine tasks and providing more accurate and timely compliance reports.

- **Reduced Compliance Costs:** The benefits of SupTech applications can extend to supervised institutions as well. They can lead to reduced compliance costs and contribute to enhanced risk management effectiveness.

- **Increased Speed of Response:** SupTech adoption is making an impact, particularly in the speed with which financial authorities are able to respond to emerging risks and take supervisory action.

- **Improved Consumer Protection:** More efficient information flows between consumers and supervisors is also leading to improved consumer protection and increased confidence in financial markets.

These benefits highlight the potential of SupTech to transform the banking sector and enhance the effectiveness of financial supervision.

Challenges of implementing SupTech in banking:

- **Computational Capacity Constraints:** The implementation of SupTech often requires significant computational resources. This can be a challenge for institutions that do not have the necessary infrastructure in place.

- **Increased Operational Risks:** The use of technology can lead to increased operational risks, including cyber-risk. These risks need to be effectively managed to ensure the secure and reliable operation of SupTech applications.

- **Data Quality:** The effectiveness of SupTech applications is heavily dependent on the quality of the data they process. Poor data quality can lead to inaccurate outputs and ineffective supervision.

- **Talent Acquisition:** Finding the right talent with the necessary skills to develop and manage SupTech applications can be a challenge. This includes not only technical skills but also the ability to understand the regulatory and supervisory context in which the technology will be used.

- **Management Support:** For SupTech initiatives to be successful, they need to have the support and buy-in from management and supervision units. This can be a challenge if there is resistance to change or a lack of understanding of the benefits that SupTech can bring.

- **Rigid Rules:** The implementation of SupTech may require changes to existing management's rules and processes. This can be a challenge in institutions where these rules are rigid and difficult to change.

These challenges highlight the need for careful planning and management when implementing SupTech in banking. Despite these challenges, the potential benefits of SupTech, such as improved efficiency and effectiveness of supervisory activities, make it a worthwhile investment.

Best practices of SupTech implementation in banking:

Implementing Supervisory Technology (SupTech) in banking can be a complex process. Here are some best practices that can guide the implementation process:

- **Set Clear and Achievable Targets:** The first step in a SupTech strategy should be to set ambitious, but achievable, targets. This includes deciding which technology will be used, in which area of supervision, and how it will be funded.

[1] AI black box refers to an artificial intelligence system where the internal decision-making process is not visible or understandable to the user. In other words, it's like a mysterious machine that produces results without revealing how it works.

Practices in the banking sector:

- **Assess Current Data Availability and Quality:** An assessment of today's data availability, data quality and availability of analytical resources is crucial. This will help identify any gaps that need to be addressed before the implementation of SupTech.

- **Develop a Step-by-Step Action Plan:** A detailed action plan should be developed to guide the implementation process. This plan should outline how the supervisory agency will get from the current situation to full implementation of its SupTech strategy.

- **Consider Practical Aspects:** Practical considerations are important when implementing SupTech. This includes understanding the lifecycle of SupTech tools and their usage during different situations.

- **Learn from Early Users:** The experiences of early users of SupTech can provide valuable insights. These experiences can help identify potential challenges and effective strategies for overcoming them.

- **Leveraging Advanced Technologies:** Banks can automate data management processes, enhance decision-making, and improve overall efficiency for supervisors by leveraging advanced technologies such as APIs, AI, machine learning (ML).

- **Fostering a Culture of Innovation:** Successfully traversing this path requires developing new skills, fostering a culture of innovation, and building systems that can effectively integrate AI technologies.

- **Implementing SupTech Solutions:** Banks should use SupTech tools in different parts of their supervision process. This includes areas like overall financial supervision, specific financial product supervision, the process of granting licenses to new financial institutions, and supervision to prevent illegal activities like money laundering and terrorism financing.

- **Monitoring and Adapting:** As with any technology adoption, banks should monitor the effectiveness of their SupTech initiatives and be ready to adapt as needed.

Remember, the implementation of SupTech is a journey. It requires careful planning, ongoing management, and a willingness to learn and adapt along the way.

Difference between RegTech and SupTech:

RegTech and SupTech are both important aspects of financial technology, but they serve different purposes and have different users.

RegTech, short for Regulatory Technology, is used by financial institutions, FinTech companies, and banks. It refers to the use of technology to help these organizations comply with regulatory requirements. RegTech solutions can automate the process of monitoring data and improve the process of meeting regulatory requirements.

On the other hand, SupTech, short for Supervisory Technology, is used by supervisors and regulators. It refers to the use of innovative technology by supervisory agencies to support supervision. SupTech solutions can help supervisory offices achieve their goal of promoting trust in financial institutions and markets.

In summary, while RegTech addresses the needs of financial institutions for compliance with regulations, SupTech provides aid to supervisors and regulators in overseeing these institutions.

Examples Worldwide:

- **Bank of Ghana:** The bank has implemented a fully integrated financial surveillance system, known as the Regnology SupTech Platform or ORASS (Online Regulatory and Analytical Surveillance Software), which consolidates and improves the efficiency and effectiveness of the data it collects and ensures consistency across departments. This platform has helped manage prudential data collection and the licensing of financial institutions.

- **European Central Bank:** The European Central Bank (ECB) has developed various supervisory technology tools based on advanced technologies such as machine learning or natural language processing. One of the tools developed at the ECB is Agora, which offers a single data lake for European banking supervision. Another tool, Navi (short for "Network Analytics and Visualisation"), helps supervisors analyze complex networks through visuals. A third example is Heimdall, a custom tool for proper data assessments.

- **Indonesian Financial Services Authority:** On March 29, 2022, the Indonesian Financial Services Authority (OJK) launched the SupTech Integrated Data Analytics (OSIDA), a new application for better monitoring the

financial services industry by automating data collection and analysis. OSIDA detects early warning signals and compliance checks as early indications of governance weaknesses in bank business activities, potential fraud, data manipulation, and non-compliance with regulations.

- **Bank of England:** The Bank of England has been working on various supervisory technology (SupTech) use cases since 2020. They have developed a strategy to leverage innovative technology in financial supervision. As part of their strategy, they launched a review in consultation with banks, insurers, and financial market infrastructures to explore the transformation of the hosting and use of regulatory data over the next decade. The review aims to increase the effectiveness of data in supporting supervisory judgements.

- **National Bank of Rwanda:** The National Bank of Rwanda (BNR) has been leveraging SupTech for financial inclusion. They have an ambitious financial inclusion agenda and a data-driven culture, which has led to a high demand for accurate, high-frequency data to monitor financial inclusion progress. BNR partnered with Sunoida Solutions to develop an electronic data warehouse (EDW) system to automate and streamline the reporting processes that inform and facilitate supervision.