



CAMBRIDGE SUPTECH WEEK 2023

**CAMBRIDGE CENTRE FOR ALTERNATIVE FINANCE/ CAMBRIDGE
SUPTECH LAB**

IN PARTNERSHIP WITH

THE BANK FOR INTERNATIONAL SETTLEMENTS (BIS)

AND THE WORLD ECONOMIC FORUM

KEYNOTE ADDRESS

BY

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Distinguished Colleagues, Ladies, and Gentlemen,

1. I am honoured to have been called upon to deliver the keynote address at this inaugural 2023 Cambridge Suptech Week.
2. This initiative has provided a dynamic platform for key stakeholders to exchange ideas research initiatives, solutions, and insights pertaining to the digital transformation of financial supervision.
3. The financial services landscape around the world continues to undergo rapid transformation, with constantly changing business models and delivery mechanisms, blurring traditional boundary lines around and across the regulatory perimeter.
4. Supervisory authorities are stepping up to the opportunities and risks presented by emerging technologies and are increasingly enhancing their own capabilities to improve effectiveness, efficiency, and accountability in supervision.
5. As a regulatory and supervisory authority for banks and a range of other financial institutions, the Bank of Ghana has over the years invested in various technological tools to support its prudential, market conduct, and AML/CFT supervisory functions. An example was the adoption of the Electronic Financial Analysis and Surveillance System (eFASS) in 2007–2008, providing an electronic portal for financial institutions to submit prudential returns.
6. While the eFASS tool helped somewhat, it had its limitations, including the rigidity of the system to accommodate the addition of newly licensed institutions, the inability to modify existing returns, add new returns, or generate ad-hoc reports and trend analyses, thereby limiting the system’s effectiveness after a few short years.
7. In addition to the above challenges with eFASS, while managing a systemic banking crisis in 2017 through 2019, the Bank of Ghana identified widespread data integrity problems in several failed banks, savings and loans companies, and microfinance institutions. Following the resolution of these failed institutions, the Bank of Ghana deemed it critical to address the weaknesses and limitations in the eFASS supervisory tool and set out on a comprehensive study of Suptech models in use in advanced economies as well as in emerging and developing economies.

8. This eventually led to the design and implementation of a new Suptech tool from 2019 through 2022, that became known as the Online Regulatory Analytic Surveillance System (ORASS). Some of the key features of ORASS include:

Scope: It is designed to enhance the effectiveness of the Bank of Ghana's supervision of banks and other credit institutions, fintechs and other payments service providers, among others. It interfaces directly or indirectly with various business application systems of regulated institutions including their accounting (general ledgers), core banking systems, and treasury management systems.

Modules: ORASS supports the entire supervisory cycle in four modules, namely:

- A Regulatory Reporting module by which supervised institutions upload completed prudential returns and submit them to the Bank of Ghana through APIs (machine-to-machine submission mode) or manual entries or file uploads on the portal for smaller institutions;
 - A Licensing & Regulatory Transactions module, which enables the Bank of Ghana to manage licensing processes, authorisations, and other regulatory actions, and integrates information from such processes with subsequent supervisory data;
 - A Risk-Based Supervision module which assigns overall risk scores and risk profiles for each regulated institution based on globally accepted risk-based supervision frameworks; and
 - An Analytics module, which in conjunction with business intelligence tools, generates interactive reports and dashboards from a Datawarehouse for authorized users.
9. I am happy to share that the project is now fully implemented after a few delays caused by pandemic-related travel restrictions that the vendors faced, and initial challenges with file uploads on the system. Already, several benefits are evident:
 - It has ensured full integration of our supervisory cycle from licensing to resolution of regulated financial institutions;

- It has provided a single portal that consolidates prudential data from regulated institutions, streamlines reporting templates, eliminates or reduces data silos and blind spots, and provides a single decision support system and standardises information presentation through customized reports and dashboards to aid operational, analytical, managerial and policy decisions;
 - It does not only support our supervisory functions, but also helps to support our monetary policy operations, and our foreign exchange market surveillance;
 - It has enabled for the first time, the collection of large volumes of granular-level data (including on a sex-disaggregated basis, age and other demographics) for classification of products and services including deposit accounts and loan types, and on digital financial services (including internet banking and mobile money-based products like micro loans), fraud related data, ESG compliance reporting, and deposit-insurance related reporting. This helps to better track access to and use of banking services and helps to design appropriate interventions to promote financial inclusion;
 - It has led to improved data integrity due to multiple in-built validation rules; and
 - It is a more dynamic system with flexibility to onboard future licensing of new entrants, updating of returns, generation of new returns and reports, and overall growing supervisory needs.
10. The above-named benefits notwithstanding, a few key lessons learned are worthy of mention. For example:
- Suptech project implementation timelines need to reflect the preparedness of regulated institutions to migrate to the new system. While early and close consultation with the industry helps to anticipate implementation challenges, regulated institutions may overestimate their capacity to migrate to the new system, and this should be factored into timelines;
 - Implementation of granular-level data collection modules may be particularly challenging, given that baseline data may be lacking. Successful and credible implementation of this module may require some intermediate steps to allow

regulated institutions to update their customer profiles before the system commences;

- The implementation of the system has introduced increased cybersecurity risks that necessitate careful consideration and mitigation. The design and implementation of ORASS coincided with the establishment by the Bank of Ghana of a Financial Industry Command Security Operations Centre (FICSOC) aimed at enhancing cyber resilience across the entire industry;
- System specifications must be appropriate for the level of sophistication of the financial system, while making room for future growth and development. Due diligence is required to ascertain the capabilities and functionalities of systems in comparable jurisdictions or markets;
- Acquisition costs could be prohibitive, and efficiency gains could be achieved by sequencing the adoption of modules, using local expertise if available or exploring pairing vendors with staff of the supervisory authority to reduce costs and promote capacity building. Costs implications for regulated financial institutions (particularly smaller ones) is also a key factor, particularly depending on the level of technological updates they are required to make for supervisory reporting and cyber security enhancements;
- Capacity building and technology transfer arrangements are key to support the post-implementation system maintenance. Bank of Ghana's project implementation approach as agreed with the foreign vendor ensured maximum technology transfer and capacity building of Bank of Ghana technical staff through active participation in the build stage, in user acceptance tests and troubleshooting. Additionally, the handholding and mentoring component of the project meant that the vendor actively built the capacity of Bank of Ghana's project implementation team to ensure that they could provide effective local post-implementation support; and
- Last but not least, Suptech, no matter how well designed and implemented, cannot replace good supervisory judgement. This requires continued investments in

capacity building of supervisors to help ensure effective risk-based supervision, supported by appropriate Suptech.

11. Bank of Ghana's experience demonstrates the benefits that Suptech can offer to promote effectiveness and efficiency in supervision to promote key objectives of financial stability, financial integrity, and financial inclusion. Lessons learned also point to challenges on the journey, and how they were resolved in Ghana,
12. I do hope that these lessons provide encouragement and guidance for other supervisory authorities seeking to invest in Suptech solutions. Clearly, there is scope for international peer learning and guidance in this area. The Bank of Ghana has had the opportunity to share our ORASS project implementation experiences with a number of other supervisory authorities in Africa and beyond, and we look forward to continuing to engage in this regard to find common solutions that meet the needs of emerging markets and developing economies.
13. We also remain committed to building on our Suptech journey by continuing to build on ORASS in areas that will complement its effectiveness. For example, our ongoing partnership with the Cambridge Suptech Lab is helping us develop a prototype consumer protection Suptech tool (with chatbox, and web and social media scraping capabilities) to interface with ORASS so that we get an integrated prudential and consumer protection view of our supervised entities. We deeply cherish and are grateful for this partnership.
14. In closing, I am confident that deliberations at this forum will help to advance a clear path forward for Suptech solutions that help to make our financial systems more stable, resilient, and inclusive.
15. Thank you for your kind attention! I wish you happy holidays and a Happy New Year in advance.