

Summary: Building a more diverse suptech ecosystem: findings from surveys of financial authorities and suptech vendors

Overview

This summary provides an overview of the FSI Brief titled 'Building a more diverse suptech ecosystem: findings from surveys of financial authorities and suptech vendors', which delves into the evolving landscape of supervisory technology (suptech) through surveys conducted by the Financial Stability Institute (FSI) of the Bank for International Settlements (BIS). The document highlights the current initiatives, challenges, and potential for growth in the suptech market, as well as the perspectives of both financial authorities and suptech vendors on enhancing the ecosystem for suptech development and implementation.

Section 1: Demand: financial authorities' approach to suptech

In the summer of 2023, the BIS surveyed 50 national authorities across 45 jurisdictions to gauge the current extent and focus of supervisory technology (suptech) activities and the interest in inter-institutional collaboration. The survey aimed to understand the demand side of the suptech ecosystem, exploring how financial authorities are engaging with suptech initiatives and their willingness to work together in this domain.

Section 1.1: Focus of current and emerging suptech activities

Among the surveyed financial authorities, 94% are engaged in supervisory technology (suptech) initiatives, predominantly developing tools in-house. Two-thirds of these authorities also collaborate with other domestic or international authorities, while a smaller proportion organize ecosystem events like hackathons. Advanced economy (AE) authorities are more likely to host such events and collaborate than those in emerging market and developing economies (EMDEs).

The primary suptech solutions deployed by financial authorities focus on data visualization, regulatory reporting, financial risk assessment, and supervisory automation. There is growing interest in developing tools for cyber risk detection, environmental, social, and governance (ESG) reporting, governance assessment, and cryptoasset monitoring, reflecting the evolving complexity of supervisory challenges.

Current suptech solutions are mainly second- and third-generation, facilitating digitization, automation, and big data architectures. Some authorities are exploring fourth-generation solutions, including artificial intelligence (AI) for predictive analytics and identifying risk indicators in supervised entities. These advancements address common challenges such as the complexity of emerging risks, data quality and timeliness issues, ineffective data usage, and limited staff resources.

Section 1.2: Organisation of suptech work

Financial authorities employ various organizational approaches for suptech initiatives, with many spreading these efforts across different departments such as data, IT, and supervisory teams. The extent to which resources are truly "dedicated" to suptech is uncertain due to a lack of detailed information on staff involvement and time allocation. Approximately one-third of authorities have established a central hub to oversee suptech activities within their organizations. A graph from the BIS illustrates the distribution of

suptech work, showing the percentage of authorities that have suptech spread across multiple teams, within specific teams like analytics or IT, or managed by a standalone team.

Section 1.3: Use of open source environments

The adoption of open source environments by financial authorities is limited, with less than a quarter considering themselves experienced users. Advanced economies (AEs) report higher usage but also face more internal barriers, while a majority in emerging market and developing economies (EMDEs) have not utilized open source at all. Key obstacles include inadequate IT infrastructure for secure collaboration, governance and legal issues, particularly concerning intellectual property, and organizational policies that restrict open source use due to cybersecurity risks. Some authorities prefer to co-develop solutions in secure, proprietary IT environments to mitigate security concerns, although this approach introduces new challenges regarding ownership and licensing. Graph 4 illustrates that 26% of AEs are experienced users facing internal barriers, compared to 24% who have not explored open source, while 50% of EMDEs have not explored it and experience internal barriers.

Section 1.4: Demand for collaboration

Financial authorities have shown a strong inclination for international collaboration in the field of supervisory technology (suptech), with nearly all survey participants expressing interest in knowledge-sharing and joint capacity-building. However, fewer authorities, especially from emerging markets and developing economies (EMDEs), are keen on co-developing suptech solutions or engaging in open source environments, largely due to capacity, organizational, and legal constraints. The technologies that have garnered the most interest for collaboration include big data, natural language processing, generative AI, distributed ledger technology (DLT)/blockchain, and quantum computing. Advanced economies (AEs) are particularly focused on exploring quantum computing. Despite the preference for in-house development, a growing market for commercial suptech solutions from private vendors is evident.

Section 2: Supply: Market for commercial suptech solutions

The market for commercial supervisory technology (suptech) solutions is expanding, with private vendors increasingly offering these products, often in conjunction with regulatory technology (regtech) solutions for financial institutions. A survey conducted by the Bank for International Settlements (BIS) in collaboration with EY and the RegTech Association (RTA) targeted firms active in the suptech market. This survey, part of the annual regtech survey by EY and RTA, included 25 firms, of which 98% were small and medium-sized enterprises (SMEs). The survey's findings provide valuable insights that could help promote the growth of the suptech ecosystem.

Section 2.1: Future state of the market

A significant majority (68%) of suptech vendors surveyed are optimistic about the growth of their market segment, anticipating an increase in business, with only a small fraction (4%) expecting a decrease. This expected growth is attributed to regulatory changes and a rising demand for innovative solutions. Vendors are actively promoting their services to national authorities, primarily through showcasing solutions, responding to procurement requests, and engaging in hackathons and proofs of concept, indicating the market's early stage and the exploratory approach of authorities. A lesser number of vendors have established direct relationships with authorities, including contracts for solution development and providing training and support. The survey also notes that financial authorities utilize off-the-shelf solutions from major IT companies, but this aspect is not the focus of the current discussion. The potential importance of these relationships suggests an area for future exploration to further diversify the suptech ecosystem.

Section 2.2: Suptech solutions for financial supervision

Suptech firms primarily address challenges in data architecture, security, data collection, and data quality assurance for financial authorities, with regulatory reporting being the most common area of focus. There is a significant overlap between suptech and regtech markets, as solutions for supervisors often parallel those for regulated entities. Financial authorities, however, tend to develop a wider range of solutions in-house, particularly in areas such as supervisory automation, financial risk assessments, business model analysis, and cryptoasset monitoring. This suggests that suptech vendors may not fully grasp the needs of authorities or that authorities prefer customized solutions, possibly sourced from non-suptech vendors. The graph provided illustrates the disparity between solutions deployed by authorities and those offered by vendors, with regulatory reporting being the most prominent area addressed by both, followed by other focus areas such as ESG reporting, AML/CFT compliance monitoring, and cyber risk.

Section 2.3: Challenges Faced by Suptech Vendors

Suptech vendors face significant challenges in expanding their portfolios and engaging with financial authorities. Over half of the vendors surveyed indicated that a lack of visibility into authorities' needs hinders their ability to grow, while market size constraints were reported by approximately half of the respondents. The majority of vendors serve a limited domestic customer base with diverse requirements, and although international expansion is possible, it presents difficulties for smaller firms.

The procurement process is a major obstacle when vendors engage with authorities, with 68% of vendors citing its length and complexity as a challenge. Other reported barriers include organizational silos within financial authorities and a lack of prioritization of suptech by these entities. These issues complicate vendors' efforts to understand and meet customer needs effectively.

Despite these challenges, fewer vendors reported difficulties in adapting their solutions to individual authorities, suggesting that suptech solutions have the potential to be scaled internationally. This indicates a positive direction for the suptech field, which is still in its early stages but is experiencing rapid growth.

Section 3: Conclusions

The rapidly expanding field of supervisory technology (suptech) has seen financial authorities implementing various solutions and organizational changes to enhance development, with a focus on regulatory reporting and data visualization. However, authorities face challenges in working with suptech vendors due to a lack of clear communication of needs, organizational silos, and complex procurement processes. The market is characterized by inefficiencies, such as authorities individually developing similar in-house solutions rather than collaborating, which could reduce costs and improve knowledge transfer. Private sector vendors struggle to serve the market without clear visibility of authorities' needs and understanding of procurement processes.

To address these issues, the document suggests measures such as increasing transparency to signal supervisory customers' needs to vendors, simplifying internal processes to lower costs for smaller vendors, and improving governance for better coordination within authorities. It also emphasizes the importance of active collaboration and ecosystem-building, recommending activities like seminars and hackathons to connect supervisors with innovators, particularly benefiting smaller vendors. There is a strong demand for international collaboration to share knowledge and jointly develop solutions, which could be facilitated by developing IT infrastructure, setting cybersecurity policies, and considering approaches to intellectual property. The document advocates for public-private collaboration in exploratory suptech projects, such as allowing private sector analytics applications to be developed on top of a common data pipeline, to stimulate innovation and private investment.