Working paper
of the Association of German Banks

Strategic Foresight in Digital Finance – Paving the way for an innovative and futureproof finance sector.

19.03.2025

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Lobby Register No R001458
EU Transparency Register No 0764199368-97

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USt.-IdNr. DE201591882

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Teaser

Since 2020, the European Commission has elaborated Strategic Foresight Reports. In these Reports they highlighted six major megatrends. We identified three key challenges that are not only essential for the EU's future but also for the stability of its banking and digital finance sectors. By leveraging digital finance, these challenges can be addressed, paving the way for a more resilient economic landscape.

What is Strategic Foresight? *Strategic Foresight is a method used to explore diverse potential futures. Unlike forecasting, it focuses on anticipating trends and risks to inform policymaking. For the European Commission, this tool is crucial for enhancing the EU's resilience and competitiveness in an interconnected world. By using techniques such as horizon scanning, scenario planning, and stakeholder engagement, the Commission seeks to develop strategies that ensure sustainable growth and innovation.*

Key Challenges Impacting the Digital Economy:

1. ***Geopolitical Shifts & Globalization Reshaping:*** *Rising geopolitical tensions and changing trade dynamics disrupt supply chains and regulatory environments, challenging the banking sector and Europe's financial autonomy. To remain competitive, Europe must adapt its financial systems to the demands of a connected and rapidly changing global environment.*
2. ***Technological Transformation:*** *The adoption of digital technologies like AI and blockchain enhances efficiency but introduces cyber risks and competition from FinTech, demanding stronger regulation to ensure stability.*
3. ***Sustainability Funding:*** *Addressing climate change requires major investment, with digital finance (e.g., blockchain, IoT) crucial for transparency and funding in support of the EU's green goals.*

Strategies for Digital Finance Integration:

1. ***Awareness and Education:*** *A collaborative public-private approach is necessary to enhance digital financial literacy across the EU.*
2. ***Understanding:*** *Initiatives such as the "Transatlantic Business Initiative" and "Tokenise Europe 2025" promote cross-border cooperation and understanding of digital finance's strategic value.*
3. ***Adapting:*** *Fostering a level playing field for innovation by encouraging state-led standards to drive interoperability and collaboration.*
4. ***Protecting:*** *Initiatives like the Cyber Solidarity Act are crucial for safeguarding the digital financial infrastructure, while maintaining open regulatory processes ensures continuous innovation.*

1 Strategic Foresight Key Challenges of European Commission and its impact on digital economy

1.1 Contribution

Since 2020 the European Commission has published four Strategic Foresight Reports. These reports identified six megatrends, which are crucial for the EU and its monetary area to address over the next decade. This paper will focus on three of these key challenges, illustrating how they are not only critical for the EU but also present significant challenges for banks and, by extension, the broader economy. In the second part of the paper, it will be demonstrated that digital finance offers a potential solution, bridging the challenges identified by the European Commission with those faced by banks and the wider economic landscape.

1.2 What is Strategic Foresight and how is it leveraged by the European Commission?

The discipline of Strategic Foresight plays a pivotal role in shaping the future by examining and anticipating developments. Unlike forecasting, it focuses on exploring diverse potential futures, along with their accompanying opportunities and challenges. The European Commission views strategic foresight as an essential tool for anticipating and addressing future challenges facing the European Union.[1] By employing foresight methodologies, the Commission aims to identify emerging trends, opportunities, and risks to inform policymaking and enhance the EU's resilience and competitiveness. This approach involves systematic analysis, scenario planning, and stakeholder engagement to develop forward-looking strategies that promote sustainable growth, innovation, and social cohesion across the EU member states. Recognizing the interconnected nature of global issues, the Commission's commitment to strategic foresight underscores its role as a proactive and forward-thinking institution in shaping the future of Europe.

Central to the above-mentioned approach is the annual publication of the Strategic Foresight Report[2] by the European Commission, which is also a direct source for its Work Programs[3]. Methodologies such as horizon scanning, megatrends analysis, scenario planning, and visioning are employed to facilitate this process. Additionally, the EU-wide Foresight Network[4] serves as a collaborative platform, uniting intelligence and foresight expertise from all Member States and the European Commission for strategic discussions on future-oriented issues. Through these interconnected efforts, Strategic Foresight actively contributes to informed decision-making and proactive planning within the EU.

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1 https://commission.europa.eu/strategy-and-policy/strategic-planning/strategic-foresight_en

2 https://commission.europa.eu/strategy-and-policy/strategic-planning/strategic-foresight_en#strategic-foresight-reports

3 https://commission.europa.eu/strategy-and-policy/strategy-documents/commission-work-programme_en

4 https://commission.europa.eu/strategy-and-policy/strategic-planning/strategic-foresight_en#eu-wide-foresight-network

1.3 Identified Key challenges with impact on digital economy

Challenge 1: The rise of geopolitics and the reshaping of globalization.

The global landscape is shifting, marked by rising geopolitical tensions and economic competition. Nations are integrating domestic and foreign policies, focusing on technological advancement and economic partnerships. Emerging economies seek greater influence, complicating international cooperation on transnational issues like climate change. The EU promotes initiatives such as the 'Global Gateway' to support various countries that are under the influence of disinformation in the growing competition with other narratives.

As globalization strains, challenges such as the pandemic and economic rivalries disrupt supply chains and trade, affecting key EU sectors. These disruptions highlight the need for resilient supply chains, raising environmental and economic concerns. Upholding multilateralism and reforming institutions like the WTO become increasingly critical in this context.

Geopolitical shifts also impact the digital economy and banking, leading to regulatory scrutiny and potential restrictions on cross-border financial transactions. These geopolitical changes may disrupt digital infrastructure of banks and prompt currency fluctuations, impacting the stability of digital financial services. Ensuring the security and stability of the banking sector remains vital, as it is crucial to Europe’s economic resilience.

The rise of dependency on external resources and technologies has emerged as a critical concern, as it compromises autonomy and long-term competitiveness. Protectionism and trade barriers further fragment markets, driving up costs and limiting innovation. This shift challenges global financial systems, especially in areas like sanctions and regulatory complexity, increasing administrative costs for banks and financial institutions.

Amid these developments, central banks are accelerating efforts in digital currencies, with the potential emergence of a digital euro raising questions about the role of banks in offering cryptocurrency platforms. Geopolitical tensions and policy shifts add uncertainty, forcing businesses to adapt through new partnerships, regulatory frameworks, and strategic agility.

The evolving landscape, marked by shifts in global trade relationships, underscores the need for strategic foresight and collaboration. To remain competitive, Europe must develop a robust blockchain infrastructure and adapt its financial systems to meet the demands of an interconnected and rapidly changing global environment.

Challenge 2: Technological transformation

Technological transformation refers to the integration of new technologies into organizations, industries, or societies, reshaping processes, products, and services. Key components include:

- Digitization: Converting analogue processes into digital formats for greater efficiency.
- Automation: Streamlining tasks through technology to boost productivity and accuracy.
- Innovation: Creating new products, services, or business models using advanced technologies.
- Cultural Change: Shifting corporate mindsets to embrace technological advancements.
- Tech Integration: Incorporating AI, IoT, blockchain, and cloud computing to enhance systems.

In the financial system, this transformation has spurred innovations like mobile payments, simplifying transactions, improving security, and increasing global transaction volumes. Digital identification has expanded financial inclusion, and the use of big data has optimized risk management, aiding financial stability. Open Banking fosters further innovation by linking financial intermediaries.

However, challenges remain. Many systems still rely on outdated processes, especially in cross-border transactions, where some parts of the world lag in digital transformation. Emerging technologies like AI, digital currencies, and enhanced financial interconnectivity, termed the "Finternet," will likely streamline market interactions, though their full impact is still uncertain.

Banks play a central role in this transformation, both driving and responding to it. Yet, this raises concerns about market stability as new players like FinTechs and InsurTechs enter. Regulation is key to ensuring trust and stability, as banks, unlike many new entrants, are held to stricter standards. Weakening banks could harm economic resilience.

The growing labor shortage highlights technology's importance as a strategic resource, replacing human resources to maintain competitiveness. However, as banks become more interconnected, they face increased cyberattacks, with significant economic losses and potential trust issues. Maintaining digital security is critical to safeguarding the financial system.

Challenge 3: Ensure sufficient private and public funding for sustainability.

"Sustainability transformation" refers to the shift in the economy, society, and politics toward sustainable development. It aims to create systems that are ecologically, economically, and socially viable long-term. This involves reducing environmental harm, promoting social justice, and fostering resource-efficient economic growth. Key areas affected include energy, agriculture, mobility, industry, and urban development, with the goal of operating within planetary boundaries to preserve a liveable environment for future generations. Achieving this requires technological innovation, societal change, and political regulations that encourage sustainable actions.

Climate change is projected to lower global GDP by 37% by 2100, with Germany already experiencing €145 billion in damages from extreme weather between 2000 and 2021. To combat this, the EU Green Deal aims to invest one trillion euros by 2030, requiring close cooperation between business, politics, and finance. With European corporate financing largely dependent on loans, banks play a key role in driving sustainability efforts.

Digital technologies are crucial for this transformation. Blockchain, for example, enhances transparency by linking ESG data to products and supply chains, enabling more targeted financing for climate goals. IoT applications, such as smart energy and waste management, also support sustainability by improving efficiency. Banks are vital partners in this ecosystem, offering expertise in identity management, transaction processing, and account management.

The involvement of banks and digital finance tools is essential for reducing long-term costs and driving the transition to a more sustainable economy, benefiting businesses, banks, and society as a whole.

2 Strategies for Advancing Digital Finance Integration

The previous section demonstrated that the support of banks in the area of Digital Finance, as well as measures to aid in the use and acceptance of digital financial instruments, can address the key challenges identified by the Commission. This section will give some examples how and with what measures banks in the Digital Finance sector can be effectively supported, and what is necessary for these to be applied in society. The specific measures to strengthen the Digital Finance sector involves a multifaceted approach centered on four core strategic elements: Awareness, Understanding, Adapting and Protecting. It becomes evident that by considering these four pillars, favorable conditions for the implementation of digital financial instruments can be created, resulting in significant benefits in terms of resilience, growth, and development for the European economy.

2.1 Raising awareness through broad education and communication

Raising the awareness for the Digital Finance topics requires more than just technological advancements; it needs a comprehensive approach based on three pillars: education, mindset, and transparent information. Effective communication is essential for fostering trust and encouraging participation. It's important to understand why some customers are hesitant about Digital Finance, often due to concerns about transparency and data security. We belief, that a lot of those concerns could be mitigated by effective communication and awareness. This however can hardly be done by the industry alone. Therefore, a Public-Private Partnerships (PPP) approach would be advisable to generally improve the digital financial literacy of EU citizens.

Building a positive attitude towards Digital Finance is vital. This involves instilling confidence, encouraging individual financial responsibility, and promoting entrepreneurial actions within the European Union. A skilled workforce with financial literacy and technological understanding is crucial. General financial literacy, including knowledge of the role of banks, is the foundation, empowering individuals to make informed financial decisions. The financial education efforts of the Association of German Banks are one example in this direction. A whole dedicated team is working on different educational offers for different target audiences, which are offered in schools with accompanying materials for teachers, online, like the influencer account "Finanzfritzen", or as part of the broad, yearly initiative "Schulbanker". This banking simulation game is aimed at students in high schools throughout the German-speaking region, allowing them to run their own banks. The main goal is to include as many participants as possible from all types of schools.

2.2 Promoting an Understanding of Digital Finance

Understanding the background and strategic vision of all stakeholders is essential for fostering an appreciation of Digital Finance's role in international relations. In the following paragraphs, a few selected initiatives are introduced, that showcase how digital finance can be promoted within the EU and beyond in a holistic approach.

For instance, initiatives like the “Transatlantic Business Initiative” (TBI) are actively promoting core components in supporting Digital Finance issues. TBI has already dedicated an entire workstream to the cross-border promotion of Digital Finance. By facilitating partnerships and advocating for regulatory coherence, TBI seeks to strengthen transatlantic economic cooperation and enhance the competitiveness of businesses in the global market. Additionally, TBI supports transatlantic cooperation by helping stakeholders understand what is relevant, such as how the relevance of standards emerges. The initiative could be expanded by the accession of other European market participants.

A prime example of bridging the gap between regulatory authorities, overseers and innovators in the market is the European Forum for Innovation Facilitators (EFIF). It plays a crucial role in promoting digital finance within the EU by fostering collaboration among key regulators, including the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA), and the European Insurance and Occupational Pensions Authority (EIOPA). By bringing together these financial authorities with innovative market initiatives and their members, the EFIF creates a supportive regulatory environment that accelerates the development and adoption of new financial technologies. Regulators involved in the EFIF share best practices, harmonize approaches, and address cross-border challenges, ensuring a cohesive and efficient framework for digital finance. Through initiatives like regulatory sandboxes and innovation hubs, these regulators enable the digital finance sector to test innovative solutions safely. This harmonized approach in the end also boosts the EU’s competitive edge globally.

Another example of promoting Digital Finance through improved understanding is the initiative “Tokenise Europe 2025.” Founded by the European Commission and Association of German Banks (Bankenverband) in collaboration with over 20 European financial service providers, industrial companies, startups, and associations, Tokenise Europe 2025 serves as a key Digital Finance initiative. The initiative underscores the benefits of tokenization and its critical role in enhancing the competitiveness of the European economy. By bringing together decision-makers from diverse sectors with key industry experts, Tokenise Europe 2025 emphasizes an educational approach, fostering understanding and collaboration among participants.

2.3 Adapting Digital Finance in the European economic network

In the area of Adapting, the focus lies on fostering networking effects among European companies and an environment conducive to mutual investment. This entails the establishment of incentive structures, along with the strategic utilization of shared resources and infrastructure that can be seamlessly scaled.

Externally, the brand “Made in Europe” embodies values of security, stability, and quality, presenting a unified image concept that resonates with stakeholders. By cultivating these shared principles, through the steps provided it not only strengthens its internal cohesion but also enhances its standing as a symbol of collective prosperity and integrity within the European business landscape.

Levelling the playing field: State encouraged standards for innovation and competition
Moreover, the dominance of BigTech corporations presents significant challenges for newcomers. The concept of First Mover Advantage has eroded in significance, primarily due to the scarcity of capital, the overwhelming size and influence of established BigTech entities, and their unparalleled pace of adapting to market innovation. This creates a prisoner's dilemma, exacerbating market failures, making it nearly impossible for smaller enterprises to compete or innovate in the same pace or level.

To navigate this landscape and foster Digital Finance, a strategic solution emerges: the implementation of state-encouraged standards. By establishing unified standards across Europe, the continent can catalyze network effects, promoting seamless interoperability and collaboration among businesses and industries. These network effects could be compared to the effects gained by large BigTechs, who often dominate markets with proprietary standards. This approach prioritizes inclusivity and interoperability, leading to sustainable growth and innovation. By mandating these standards, smaller companies gain a level playing field, empowering them to innovate and compete effectively. Late movers can still thrive if provided with secure footholds in the market. This mitigates the risks inherent in the prisoner's dilemma and fosters a diverse and innovative environment.

A crucial aspect of promoting Digital Finance is strengthening banks and the financial sector in their competition with BigTech, enabling banks to drive innovations organically. This effort should also consider the dual role of BigTech companies as both enablers and sources of dependency for banks. BigTech firms not only challenge banks but can also provide certain technological capabilities that can expand and support the services of banks.

Examples like the Payment Services Directive 2 (PSD2) can show some possibilities in this approach, establishing a baseline for market conduct and serving as catalysts for smaller players. Extending this approach to an open financial framework (FIDA) can create a vibrant market with new customer benefits in the medium term, provided it is focused on actual customer needs, and it is given sufficient room for a market-driven development. Supporting banks in the innovation race against BigTech could create a balanced and dynamic digital finance ecosystem.

Innovative Financing Instruments
Inspired by the German Future Financing Act (dt. Deutsches Zukunftsfinanzierungsgesetz), which particularly promotes electronic securities (dt. eWPG) as well as MiCAR, the innovation of financing instrument should set on a broader basis and fostering the development of a single European

capital market. Therefore, the ideas of decentralized venture capital (VC) based on MiCAR and tokenization as well as instruments from decentralised finance could help to frame a landscape of innovative financing instruments. By synthesizing these elements, the aim is to propel the European financial infrastructure into a new era of accessibility, efficiency, and decentralization, mobilizing capital within Europe.

Innovation capital for a European FinTech ecosystem
To establish a thriving FinTech ecosystem centered around Digital Finance solutions in Europe, it is essential to provide capital for innovations made in Europe within the financial sector. Furthermore, creating protected areas and sandboxes within the innovation ecosystem for testing technology is crucial. These designated zones, a mix of technology sandbox financed by innovative finance products based on tokenisation, offer secure spaces for experimentation and development, like "Special Economic Zones," encouraging investment in pioneering ideas. However, regulatory sandboxes must be restricted to supervisory regulation. In contrast to this, consumer protection needs clear and reliable rules.

Additionally, investments in innovation are investments in the future. Such investments require broad acceptance, but also broad awareness. A shift towards a more equity-based pension systems in Europe can contribute to the wider availability of innovation capital and more generally a mindset shifts among private investors. This could be accompanied by tax advantages for private capital investments as well as employee participation programs complementing this approach. This comprehensive strategy fuels Europe's innovation engine, fostering a dynamic ecosystem where creativity flourishes and investments thrive.

2.4 Protecting the Digital Finance sector

A trade-off has been highlighted between protection and independence from third parties from one perspective and close international cooperation in a globalized world from another. This cooperation can strengthen innovation and development, thereby preventing dependency.

One of the primary focuses should be support and collaboration between national cybersecurity efforts which play a crucial role for protecting the Digital Finance sector. The recent significant initiative is the Cyber Solidarity Act that emerges as a pivotal program to bolster our IT security capabilities, thereby protecting Europe’s values and economy. This act, through the collaboration of various cybersecurity agencies of the member states, could effectively function as a "Cyber Army for Europe". Such a coordinated effort would protect the Digital Finance sector as well as all other sectors of our economy.

Balancing competition and sovereignty in different scenarios, we can ensure that Europe's Digital Finance sector remains both innovative and secure. Protecting access to innovation is another solution approach: maintaining openness to new partnerships and innovations ensures that Europe remains at the forefront of technological advancements. Regulation can support those developments from the sidelines, if the overall drafting process is conducted structured, transparent, and open way.

Another important aspect with regards to Digital Finance are investments in innovations and in future developments of the underlying infrastructures. Besides being crucial for fostering financial inclusion and enhancing security they are also insuring the competitiveness of our European Digital Finance sector. Investments require a secure political environment, the basis for this is our democracy. Currently our democracy and its institutions are coming under attack by several forces. For this reason, we support the idea of safeguarding our democracy and its values by the introduction of a “European Democracy Shield”, as proposed by European Commission President Ursula von der Leyen. This shield aims at protecting democratic institutions and processes from external interference and manipulation. Integrating collaborative efforts among member states to defend against threats that undermine democratic integrity, this shield focuses on democracy, free elections, and the prevention of fake news. Balancing the trade-off between protecting our sovereignty and fostering close international cooperation will be essential in ensuring both security and innovation in our increasingly interconnected world.

3 Conclusion

By applying the Strategic Foresight method, the European Commission highlights the importance of proactive planning and anticipating future challenges, bringing them into public discourse. The identified areas allow for the development of future scenarios, enabling present actions to shape the desired future.

This paper has shown that key challenges from the Strategic Foresight Report— climate change, digital technologies, and geopolitics — also affect the rapidly evolving financial environment. These challenges significantly influence the European digital economy, and Digital Finance is a crucial tool for addressing them. By leveraging foresight and integrating Digital Finance into society and the banking sector, the EU can secure a resilient, competitive, and transformative financial system in the long term.

The second section outlines how sustainable integration of Digital Finance relies on four pillars: Awareness, Understanding, Adapting, and Protecting. Various successful initiatives have already advanced this integration.

However, much untapped potential remains. Innovations like artificial intelligence could significantly revolutionize banking processes. Furthermore, the integration of blockchain technology in the banking sector is still at an early stage of development. Realizing this potential is essential for tackling the challenges highlighted by Strategic Foresight.