



THE SUPERVISION OF FINTECH IN THE AFRICAN REGION



FRAMEWORK

CONTENTS

EXECUTIVE SUMMARY	3
1 INTRODUCTION	5
2 AN OVERVIEW OF THE FINTECH LANDSCAPE IN AFRICA	6
3 FINTECH: RISKS AND SUPERVISORY CHALLENGES	11
4 PRINCIPLES AND POLICY CONSIDERATIONS FOR THE SUPERVISION OF FINTECH IN AFRICA	16
5 CONCLUSIONS	29
6 ANNEXES	29
7 ACRONYMS	30
8 REFERENCES	30

ACKNOWLEDGMENTS

This regional Policy Framework was developed by AFI members and endorsed by its AfPI leaders as a policy guide to facilitate in-country financial inclusion policy implementation across the AFI network in Africa/ECA/LAC/Asia and beyond. Development of this regional policy framework was financed by AFI's Multi-Donor Financial Inclusion Policy Implementation Facility (MD-PIF), with participation of French Development Agency (AFD), the German Federal Ministry for Economic Cooperation and Development (BMZ), and the Ministry of Finance of the Grand Duchy of Luxembourg.

EXECUTIVE SUMMARY

FinTech is seen as a positive force for driving innovation in the financial market, often accompanied by increased competition benefiting customers and the efficiency of the financial system. Thus, the development of a FinTech industry is aligned with the main objectives of many financial authorities in terms of improving market access and efficiency.

According to the 2021 Global Findex, the gender gap in account ownership in developing countries has decreased from nine to six percent for the first time. Women's financial inclusion was facilitated through increased digital transactions during the COVID-19 pandemic, driven by the use of FinTech. However, in Africa, this trend has not materialized highlighting the need for authorities, including financial supervisors, to ensure that FinTech's potential benefits for financial inclusion with gender equality are fulfilled.

Africa has a dynamic and growing FinTech market centered on e-Money and other payment services with a trajectory of over 15 years. Moreover, holders of new mobile money accounts in the region represented 59 percent of the increase in account ownership between 2014 and 2021 according to data from the World Bank's Global Findex,¹ underscoring the role of these innovative products in improving financial inclusion. The COVID-19 pandemic has further accelerated the sector's growth, with an increasing number of players and investment, for example, the number of FinTech firms doubled between 2019 and 2021.²

However, in the absence of adequate supervision, market misconduct by FinTech firms and other consumer protection issues may negatively impact the goals of financial inclusion. Another concern is that FinTech products and services and players that facilitate (either directly or indirectly) illicit financial activities hamper efforts to ensure market integrity and reduce financial fraud.

At its current stage of development, systemic risk from FinTech activities is believed to be low as regulatory frameworks for e-Money services across the region substantially mitigate insolvency and liquidity risk. However, the relatively less important role of prudential supervision may be reassessed as FinTech

firms broaden their portfolio of products and services beyond payments, to provide digital loans, micro insurance, wealth management, and micro pensions. Also, the role some FinTech firms play in providing key services as outsourcers for traditional financial institutions and other FinTech firms raises concerns regarding financial stability.

Some of the products and services provided by FinTechs are sophisticated and could pose usage challenges, especially for vulnerable groups such as women, hence, the need for supervisors to adopt a risk-based approach that considers gender-sensitive consumer protection frameworks.

Thus, supervisors face the difficult task of balancing the benefits of FinTech developments on financial inclusion while ensuring safe, stable, responsible, and secure financial products and services. Supervisors have to ensure that financial customers are protected irrespective of the technologies, distribution channels, and business models employed to deliver and process financial services.



The goal of this policy framework is to, therefore, provide the principles and a set of policy considerations for supervisors in the Africa region to develop coherent supervisory and policy approaches towards FinTech firms, products, and services, that are compatible with the key objectives of inclusive finance, financial stability, consumer protection, and market integrity.

FinTech activities also have a significant cross-border dimension. On the one hand, several of the largest players are owned by companies based outside the region, especially the mobile network operators behind e-Money providers. On the other, many FinTech firms operate in several countries across Africa, outsourcing services to extra regional companies and transmitting customer data across borders, trends facilitated by the technologies underpinning their products and services. As a result, supervisors face challenges in terms of complexity, size, and interconnectedness.

1 World Bank. 2021. The Global Findex Database. Available at: <https://globalfindex.worldbank.org/>

2 Disrupt Africa. 2022. African Tech Startups Funding Report 2021. Disrupt Africa. Available at: <https://disruptafrica.gumroad.com/L/hheig>

A survey conducted for this policy framework found that policymakers are mostly concerned with the detrimental effects of the provision of FinTech products and services to retail customers, consumer protection, and data privacy, while operational and market integrity risks arising from FinTech activities rank high on the agenda of supervisors.

At the same time, authorities face important challenges when supervising FinTech firms. These may arise from absent or inadequate regulations, links between traditional financial institutions and FinTech firms, inadequate customers protection rules, low digital financial literacy, and the already mentioned international dimension of FinTech activities. Supervisors confront rapidly evolving business models and technologies, potentially creating knowledge gaps in the FinTech landscape. At the same time, traditional supervisory tools and mechanisms may not be suitable or flexible enough to properly assess these innovation risks.

The degree to which supervisors have the required capabilities to properly supervise FinTech activities is, unsurprisingly, correlated to the maturity of the regulatory framework and the knowledge of a FinTech activity. Therefore, most supervisors are highly confident they are well equipped to oversee payments activities, whereas the opposite is the case with crypto assets and other virtual asset services.

To provide a solid foundation for the development of policies for the supervision of FinTech in Africa, this policy framework analyzes these topics building on previous AFI documents and in accordance with the relevant principles of proportionality, technology neutrality, cooperation and collaboration, and clear supervisory purview and enforcement powers.

In understanding the role of FinTech in promoting financial inclusion, supervisors should consider the level of risk and economic impact of FinTech activities in the market when assessing policy options.

Alongside the proportionality principle, the supervision of FinTechs requires a specific guiding principle: technology neutrality. This refers to the functionality of FinTech products and services, irrespective of the technology used, and is an approach that allows new technological developments to emerge while focusing the supervisor's attention on the financial risks arising from FinTech activities.

The other two principles are similar to those pertinent to other financial institutions but acquire special relevance in the context of FinTech. It is essential

for supervisors to seek cooperation and collaborate with other authorities, locally and internationally, to share experiences and information, as well as devise joint approaches on these emerging types of financial activities that easily extend across borders. Furthermore, supervisors require clear mandates and enforcement powers to engage in the surveillance of FinTech players.

Given this context, this policy framework proposes policy considerations for the supervision of FinTech in Africa in six areas:

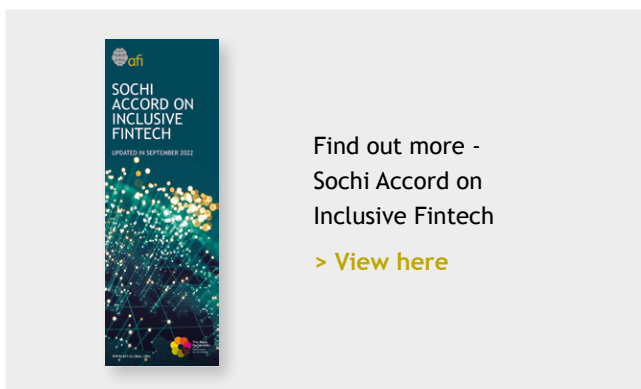
- > **Identifying emerging risks from FinTech activities**, monitoring developments and building knowledge on this topic, through cooperation with other supervisors, industry engagement, and testing innovations in controlled environments.
- > **Selecting a supervisory approach to FinTech**, according to the regulatory framework, level of development of the FinTech market, and its identified risks.
- > **Assessing the effectiveness of the existing supervisory framework** and defining a suitable institutional arrangement based on an evaluation of the institutional capacity and resources of the supervisor and by engaging with other authorities.
- > **Promoting regional and sub-regional collaboration in FinTech supervision**, seeking to exchange information and experiences, enhancing existing cooperation mechanisms to include FinTech, and considering joint approaches with FinTech firms operating across borders and on cybersecurity threats.
- > **Establishing a financially inclusive supervisory framework** by adopting a risk-based approach towards the supervision of FinTech firms, while also expecting commitments from those firms to provide the newly included with the required tools for safe digital financial transactions.
- > **Exploring the deployment of innovative supervisory tools (SupTech)**, as a way to equip the supervisor to monitor FinTech activities in equal terms as the supervised entities.

Specific policy actions are suggested for each of these areas, in some cases allowing for differences in legal systems, the state of financial sector development, and level and diversity of FinTech activities. These have been mostly drawn from the experience of AFI members in the region, reflecting its characteristics. Authorities may also find references to specific actions and developments by supervisors on FinTech within this policy framework and the accompanying case studies.

1 INTRODUCTION

The provision of financial services is being revolutionized worldwide by technology-driven innovations. This ongoing process, known as FinTech, is described as “technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services” (FSB, 2021).

Thus, it transcends the mere adoption of new technologies to encompass broader changes in how financial services are delivered, the emergence of new players, and the blurring of lines between regulated and non-regulated services and products. At the same time, FinTech developments have proven to be useful tools for the promotion of financial inclusion, by increasing the reach of financial services providers, lowering the costs of products and services, and enabling access to those lacking prior experience with financial institutions, a role acknowledged by AFI in the Sochi accord.³



Therefore, across many jurisdictions, FinTech innovations are providing a rather unprecedented fast-paced access to formal financial services for large populations of the underbanked and unbanked.

For supervisors, these transformations, speed and scope are creating challenges and introducing new complexities in their tasks.

The Africa region, as described in section two, has a very dynamic FinTech scene, especially in payments

and lending services, with a varying scope and maturity across the region. Responses or approaches to FinTech by supervisors reflect the different levels of FinTech development and regulatory frameworks.

The goal of this policy framework is to provide a systematic guide to supervisors in the Africa region to develop coherent supervisory approaches and policies towards FinTech firms, products, and services, compatible with the key objectives of inclusive finance, financial stability, consumer protection, and market integrity. It has been prepared from information provided by AFI members in the region, relevant guidance by Standard Setting Bodies, and industry and thematic thought contributors.

³ Alliance for Financial Inclusion. 2022. Sochi Accord FinTech for Financial Inclusion. Available at: https://www.afi-global.org/wp-content/uploads/2022/09/Sochi_Accord-22_stg3.pdf

2 AN OVERVIEW OF THE FINTECH LANDSCAPE IN AFRICA

Africa can justifiably claim to be the cradle of one of the most emblematic FinTech products.

The launch in 2007 of an e-Money wallet, M-Pesa, by Safaricom, and Mobipower by E-fulusi mobile network operators (MNOs), in close coordination with the Central Bank of Kenya and Bank of Tanzania, respectively, ushered in the dawn of mobile phone-based financial services and products.⁴ Nowadays, the whole region is considered the global leader in e-Money transfer services, a key tool in the increase in financial inclusion across Africa.⁵ According to the World Bank's Global Findex Database, for the increase in account ownership between 2014 and 2021 on the continent, 18 percent was entirely attributed to mobile money account ownership.⁶

However, contrary to what has been observed in the developing world, the increase in account ownership has not led to greater gender equality. Whereas across all developing countries, the financial inclusion gender gap saw a reduction from 9% to 6%, in the Africa region the gap increased from 10% to 12%. It is important to note, though, that the trend was prompted by mobile money account ownership among countries that experienced a reduction in the gap.⁷

An estimate by a trade body put the number of FinTech firms in the Africa region at 573 in 2021, with a significant increase in funding during the pandemic.

RANGE OF FINTECH ACTIVITIES

Payments-related products, including domestic and international remittances, are the most prevalent FinTech service in the region, as reported in the Innovative Regulatory Approaches Toolkit.⁸ This fact was corroborated in a survey among AFI members in the region conducted for this policy framework.

An important fact from a supervisory priority is that in many African countries, there are more e-Money accounts than bank accounts.⁹ According to the IMF Financial Access Survey in 2020, there were 229 million registered e-Money accounts, compared to



Innovative Regulatory
Approaches Toolkit

> [View here](#)

211 million accounts at commercial banks, credit unions, cooperatives and deposit taking microfinance institutions in the 21 countries that submitted consistent data.¹⁰

The impact of these innovative products on financial inclusion has been notable. Indeed, e-Money arguably has been responsible for higher financial inclusion levels in East Africa.¹¹ In most markets, e-Money is dominated by subsidiaries or affiliates of Mobile Network Operators (MNOs).

Another segment of the FinTech landscape is represented by new players offering innovative products building on the increased availability of mobile data access and the familiarity of users with accessing financial services on their mobile phones, adding digital loans, micro insurance, wealth management and micro pensions products to their platforms.

- 4 G-Cash, an e-Money service in The Philippines launched three years before, but initially it “experienced low take-up in part because of the availability of a competitive alternative”. See: Mas, I., and Radcliffe, D. 2011. Mobile Payments Go Viral: M-PESA in Kenya. *Journal of Financial Transformation*, 169-182.
- 5 Sy, A., Maino, R., Massara, A., Perez-Saiz, H., and Sharma, P. 2019. FinTech in sub-Saharan African countries: a game changer? Available at: <https://www.imf.org/-/media/Files/Publications/DP/2019/English/FTSSACEA.ashx>
- 6 Bank. 2021. The Global Findex Database. Available at: <https://globalfindex.worldbank.org/>
- 7 Ibid.
- 8 AFI Network Insights 4: Most Common Fintech Services Per Region in: Alliance for Financial Inclusion. 2021. Innovative Regulatory Approaches Toolkit. Available at: <https://www.afi-global.org/publications/innovative-regulatory-approaches-toolkit/>
- 9 Sy, A., Maino, R., Massara, A., Perez-Saiz, H., and Sharma, P. 2019. FinTech in sub-Saharan African countries: a game changer? Available at: <https://www.imf.org/-/media/Files/Publications/DP/2019/English/FTSSACEA.ashx>
- 10 International Monetary Fund. 2020. Institutional arrangements for Fintech regulation and supervision. Available at: <https://www.imf.org/en/Publications/fintech-notes/Issues/2020/01/09/Institutional-Arrangements-for-Fintech-Regulation-and-Supervision-48809>
- 11 Ahmad, A., Green, C., and Jiang, F. 2020. Mobile Money, Financial Inclusion and Development: A review with reference to African experience. *Journal of Economic Surveys*, 753-792.

TABLE 1: FUNDED AFRICAN FINTECH STARTUPS IN 2021

LEVEL OF FUNDING	NUMBER	PROPORTION
Over USD20 million	7	6%
Between USD5 and USD20 million	18	16%
Between USD1 and USD5 million	45	39%
Under USD1 million	45	39%
Funding disclosed	115	100%

Source: Disrupt Africa (Disrupt Africa, 2022)

TABLE 2: RANGE OF FINTECH PRODUCTS AND SERVICES

FINTECH AREA	PROPORTION OF AFI MEMBERS THAT REPORTED ACTIVITY IN THEIR JURISDICTION	SERVICES OR PRODUCTS OFFERED BY AFRICAN FINTECH FIRMS
E-Money	89%	E-Money Mobile wallet
Payments	78%	Payment gateway SMEs payment gateway Foreign exchange B2B
Digital lending	56%	Digital mobile lending Automated savings Buy Now - Pay Later (BNPL) Bank as a platform Digital bank Loans to businesses P2P loans - consumers
Crowdfunding	33%	Crowdfunding - equity Crowdfunding - lending
Crypto assets	22%	Exchange - wallet Exchange - P2P Crypto/fiat digital wallet

Source: Survey AFI Africa members 2022 and own research.

A third segment that is equally relevant to supervisors is that FinTechs are providing technology-related services to financial institutions. These include digital customer onboarding, remote Know Your Customer (KYC) or e-KYC, cloud computing, BaaS, data analytics and non-traditional credit scoring. According to the surveyed AFI members, these types of services are being used (or provided by) traditional financial institutions and customer facing FinTech firms.

Finally, there are emerging FinTech products and services that are not adequately recognized by the current regulatory frameworks, which include crowdfunding (both debt and equity) and crypto assets, among others.

OWNERSHIP OF FINTECH FIRMS

As in other regions, most FinTech firms are startups founded by individuals. Growth in FinTech funding has been in the double digits in the last four years, with a record in 2021 of USD2.1 billion invested in 564 startups.¹² According to a recent survey, the startup founders seek acquisitions by other firms or mergers as their long-term objective.¹³ In turn, the acquirers see these transactions as a way to enter new markets.

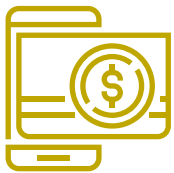
¹² Disrupt Africa. 2022. African Tech Startups Funding Report 2021. Disrupt Africa. Available at: <https://disruptafrica.gumroad.com/L/hheig>

¹³ Findexable. 2021. Available at: https://findexable.com/wp-content/uploads/2021/07/Findexable_DIT-Africa_Report_FINAL_16Jul21.pdf

Foreign sources of funding, mostly from the US and China, dominates FinTech funding, and is explained by the limited interest in FinTech by regional investors, who prefer traditional business areas.¹⁴ On the other hand, these investments are helping startups to expand, both within their home countries and to other countries in the region.¹⁵

These trends, as well as the decision by some startups to incorporate in countries outside the region to better attract investors, are relevant for their supervision as it raises issues regarding governance arrangements and responsible oversight.

These companies also play a key role in providing access and distribution of digital financial services, for their subsidiaries and other financial services providers.



MNOs represent 73 percent of non-bank e-Money providers in Africa, and more than half of these are owned by companies from outside the region.¹⁶

This feature, along with regulatory overlap, brings challenges to supervisors in terms of complexity, size, and interconnectedness.

Their extensive agent networks potentially allow MNOs to become credible competitors to commercial banks, tapping into their large unbanked customer base. At the same time, MNOs are adding more financial products to complement their e-Money services, either on their own (if the regulatory framework allows) or in partnerships with licensed financial institutions. In part, this may be explained by the success of MNOs in their FinTech activities, registering earnings before interest, taxes, depreciation, and amortization (EBITDA) margins of over 50 percent, representing a large proportion (up to 10 percent) of their net income and of their market value.¹⁷ On the other hand, traditional FIs are also seeking to retain market share by deploying innovations, either developed in-house or by acquiring FinTech start-ups.

CROSS-BORDER ACTIVITIES

The significant presence of mostly foreign-owned MNOs operating across the region, as owners or controlling stakeholders of FinTech firms, adds a cross-border dimension to FinTech. This regional dimension is emulated by new FinTech players as well and contrasts with other regions where FinTech firms tend to focus on their local markets.

In general, the most internationalized FinTech firms originate from the largest FinTech hubs in the region - Nigeria, South Africa, Ghana, Egypt and Kenya - where a combination of large domestic markets, a longer history in FinTech developments and enabling regulations allowed the firms to achieve the financial and technical strength to expand into other jurisdictions.

ORANGE: FROM E-MONEY TO DIGITAL BANK

Launched in 2008 in Côte D'Ivoire, French-owned Orange Money initially provided its users with basic e-Money services.

Now, as a fully-fledged licensed E-Money provider, the firm expanded to 18 countries, using the parent's MNO footprint. In 2020, in partnership with NSIA, a regional insurance and financial group, the MNO launched Orange Bank Africa, also in Côte D'Ivoire, a digital bank offering full banking services. In just over a year, the digital bank has attracted over 300,000 clients, two-thirds of them with loans. It is important to note that Orange Mobile has 60 million customers (22 million active) out of the MNO's 128 million customers.

FinTech is more likely to tap into opportunities brought about by immigration within and outside the region, offering faster and cheaper remittance products than traditional FIs and money transfer providers.

This is clearly appreciated when comparing the cost of sending funds to and from countries in the region between mobile operators (which includes both MNOs, related firms, and other payment FinTech firms) and traditional financial institutions, as reported by the World Bank.

Another driver for cross-border FinTech activity has been, as elsewhere, the growth of e-commerce, both within the region and in other areas. This trend has led regional FinTech to seek ties with partners in the countries of origin of the traded goods, particularly China.

14 Pilling, D. 2021. African start-ups attract international investors – but need local ones too. Financial Times. Available at: <https://www.ft.com/content/566fc2a5-6df4-4145-8157-99d4eb8da4c1>

15 Hammerschlag, Z., Bick, G., and Da Silva Luiz, J. 2020. The internationalization of African fintech firms: marketing strategies for successful intra-Africa expansion. International Marketing Review.

16 GSM Association. 2021. The Mobile Economy: Sub-Saharan Africa 2021. Available at: https://www.gsma.com/mobileeconomy/wp-content/uploads/2021/09/GSMA_ME_SSA_2021_English_Web_Singles.pdf

17 Reuters. 2021. Africa's digital payments race becomes a scramble. Available at: <https://www.reuters.com/breakingviews/africas-digital-payments-race-becomes-scramble-2021-05-05/>

In general, cross-border expansion follows regional patterns based on shared language, trade, migration, and cultural affinities.¹⁸

Using remittances as a launch pad, FinTech firms are now expanding their services to allow customers in one country to pay for health services and other expenses in others.

TECHNOLOGY ENABLERS

The FinTech range of products and services are shaped by the set of technologies available in each market. In Africa, the spur for FinTech penetration has been the widespread adoption of mobile telephony, with a penetration rate of 46 percent in Sub-Saharan Africa (unique subscribers).¹⁹ This helps explain the emphasis on payment products and services, as these can be easily provided to users of feature phones. In a survey of 177 emerging market FinTech startups, most of them from Africa, two-thirds offer products that do not require a smartphone.²⁰

At the same time, the growing presence of innovation hubs, including by large financial and technology firms - Visa, Google and Microsoft - could improve the availability of professionals with the desired skillset demanded by the FinTech sector and, crucially, for supervisors.

An important factor is access to essential services, such as cloud computing facilities and other technological infrastructure, which in key instances involve outsourcing these services to extra-regional providers, adding a cross-border element.

18 Hammerschlag, Z., Bick, G., and Da Silva Luiz, J. 2020. The internationalization of African fintech firms: marketing strategies for successful intra-Africa expansion. *International Marketing Review*.

19 GSM Association. 2021. The Mobile Economy: Sub-Saharan Africa 2021. Available at: https://www.gsma.com/mobileeconomy/wp-content/uploads/2021/09/GSMA_ME_SSA_2021_English_Web_Singles.pdf

20 Catalyst Fund. 2021. The State of Fintech in Emerging Markets. Available at: <https://bfaaglobal.com/catalyst-fund/insights/the-state-of-fintech-in-emerging-markets-report/>

TABLE 3: AVERAGE COST FOR A REPRESENTATIVE USD200 REMITTANCE - AFRICAN COUNTRIES

OPERATOR	WITHIN THE REGION	FROM OTHER REGIONS
Mobile Operator	4.3%	2.1%
Bank	20.7%	11.7%
Money Transfer Operator	11.4%	6.6%
Non-Bank FI	39.9%	NA

Source: World Bank. 2021. Remittances Prices Worldwide. Available at: <https://remittanceprices.worldbank.org>

TABLE 4: PRESENCE IN COUNTRIES OUTSIDE HEADQUARTERS - SELECTED FINTECH PROVIDERS

SERVICE	PROVIDER	WESTERN AFRICA FRANCOPHONE	WESTERN AFRICA ANGLOPHONE	CENTRAL AFRICA	EASTERN AFRICA	SOUTHERN AFRICA	NORTHERN AFRICA	TOTAL
Payments	MFS Africa	9	5	4	8	8	0	34
Payments	DPO Group	4	1	1	5	7	0	18
Payments	Orange Money	5	3	3	2	0	3	16
Financial Infrastructure	Flutterwave	1	1	1	5	3	0	11
Payments	M-Pesa	0	1	1	2	3	1	8
Investment Management	Chipper Cash	1	1	0	4	1	0	7
Financial Infrastructure	Jumo	1	1	0	3	1	0	6
Capital raising	Afrikwity	2	0	0	0	0	2	4

Source: Own research

THE REGULATORY AND POLICY CONTEXT: A BRIEF OVERVIEW

Many jurisdictions in the region have robust regulatory frameworks for mobile payments and e-Money services.



As shown in an analysis by the GSM Association, an enabling regulatory framework promotes both a broader range of services and encourages the financially excluded to use them.²¹

A similar conclusion, a strong positive correlation between enabling regulations and ownership of e-Money accounts, was reached in a study by the World Bank.²²

Advances in regulations on digital lending are more uneven with some countries having issued new ones in recent years while others have no specific guidelines to address digital lending. Examples of the first group are Kenya and Tanzania.²³ Regulatory initiatives in other areas such as crowdfunding or crypto assets lack a comprehensive set of regulations or are in the early stages of development.²⁴

Public policies and initiatives may also have a significant effect on developing a healthy FinTech ecosystem. A common starting point has been identifying FinTech as a tool in national financial inclusion strategies, which should acknowledge the negative consequences of inadequate supervision of FinTech providers.

More specifically, central banks have been implementing initiatives to develop public-private dialogues with relevant stakeholders, such as industry outreach through events, or working groups on FinTech. In fact, all the supervisors consulted for this document indicated having engaged the FinTech community through working groups or committees. In most cases, the authorities created specialized FinTech units as well as regulatory sandboxes and innovation hubs. Less common today is the use of no objection notifications as a strategy to promote FinTech activity while the regulatory framework is being developed.

OVERVIEW OF FINTECH SUPERVISION IN THE REGION

Most supervisors are directing their attention to digital payment firms, focusing on consumer protection and market integrity issues. To a lesser extent, supervisors are also examining licensed the outsourcing arrangements of financial institutions with FinTech

firms, using the same approach to FinTech firms and traditional FIs, engaging in onsite examinations and offsite monitoring.

In some cases, financial supervisors are seeking collaborations from other authorities involved in the regulation of FinTech activities, e.g. financial intelligence units, telecommunications and insurance regulators, to monitor developments in areas where either boundaries are not yet clearly defined by regulations or where regulatory collaboration is important, usually formalized in an agreement or prescribed by law.

21 GSM Association. 2019. The Mobile Money Regulatory Index. GSMA. Available at: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/03/Mobile-Money-Regulatory-Index-2019.pdf>

22 World Bank. 2021. The Global Findex Database. Available at: <https://globalfindex.worldbank.org/>

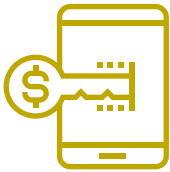
23 For further information on Tanzania's case, see AFI's Digital Credit Regulation in Tanzania. 2020. Available at: https://www.afi-global.org/sites/default/files/publications/2020-11/AFI_DFS_Tanzania_CS_AW2-digital.pdf

24 This overview of the regulatory status for FinTech activities was confirmed in a survey of nine regional AFI member conducted between February and March 2022.

3 FINTECH: RISKS AND SUPERVISORY CHALLENGES

As a new set of financial products, services and business models, FinTechs introduce changes to the inherent risks of various financial activities.

The heavy reliance on technology and focus on payment-related activities in the region define the key risks of FinTechs, as identified by Africa's AFI members.²⁵ In their view, the areas involving the highest risk are consumer protection, data privacy, operational, and AML/CFT.



From a financial inclusion point of view, the harm to customers from fraud, misuse of their personal data, lack of access to their funds due to the operational failures of providers, and inadequate customer service should be at the top of the evaluation process of supervisors.

Risks concerning governance, funding and the unregulated cross-border provision of financial services are considered as being moderate. This reflects the current regulatory framework that, although developed for traditional financial institutions, is mostly applicable to FinTech firms. Also, as described above, the FinTech sector has received significant and increasing funding in the past few years.

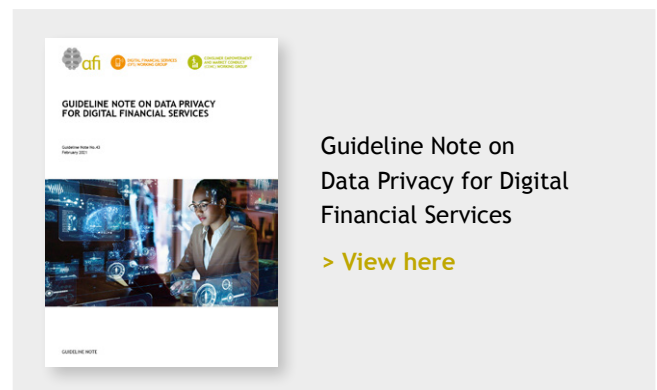
Liquidity and systemic risks arising from FinTech activities is regarded as low by some supervisors. This view is closely tied to the e-Money regulatory framework in most jurisdictions that mandate providers to back all e-Money issued with bank deposits, thus mitigating insolvency and access to funds. However, in a few jurisdictions, the large size and role played by e-Money providers in their economies raise concerns regarding financial stability.

Nevertheless, as FinTech firms are starting to offer other products and services, such as lending, savings, investments, micro pensions and micro insurance, the scope and complexity of FinTech risks are likely to increase across the region.

This assessment of the risks brought about by FinTech reflects the local FinTech landscape, and influences the supervisory approach taken by authorities in the region.

Data privacy risks are a particular concern in the FinTech industry as its business models rely on the automated processing of huge quantities of personal data. Another relevant issue for supervisors is FinTech firms owned by foreign companies based in jurisdictions with divergent approaches to data privacy. These issues are explored at length in AFI's Guideline Note No. 43,²⁶ which identifies the following data privacy risks:

- > no control over the processing of personal data
- > sensitive data may be compromised
- > incorrect, misleading, incomplete, or out-of-date personal data may be processed
- > automated decision-making, including profiling, may lead to unfair decisions
- > identity fraud and misuse of official IDs may occur
- > recourse rights may be limited
- > data controller systems and procedures do not ensure data privacy



Guideline Note on
Data Privacy for Digital
Financial Services

> [View here](#)

It is also important to highlight that such risks may arise at unregulated FinTech firms which provide services to FIs or when the supervision of outsourcing arrangements is weak.

Likewise, FinTech business models can sometimes lead to uncertainty among customers regarding who is responsible for redressing errors and handling complaints. The unbundling of financial products between customer-facing financial services providers and solutions providers may create a scenario where customers suffer financial harm while the allocation of responsibilities is not clear.

²⁵ Survey conducted between February and March 2022.

²⁶ Alliance for Financial Inclusion. 2021. Guideline Note on Data Privacy for Digital Financial Services. Available at: https://www.afi-global.org/wp-content/uploads/2021/02/AFI_GN43_AW3_digital.pdf

This could be compounded by the lack of a physical presence which may complicate customers reaching the provider, especially if they cannot use the usual access channels. Also, within the same area, access to unregulated financial services made easier by FinTech exposes customers to financial losses outside the remit of consumer protection authorities.

Technological risk is particularly heightened with IT processes and data transmission underpinning FinTech services. A special source of risk is FinTech dependence on network availability, both for customer interactions and data processing by third parties. There is also the potential mismatch between internal controls and rapidly expanding operations, thus creating the conditions for internal fraud.

CHALLENGES WITH SUPERVISION OF FINTECH FIRMS IN THE REGION

However, as FinTech activities go beyond payments, this leaves regulatory gaps highlighting the need to develop a broader supervisory approach.

In the context described in the previous section, supervisors face specific challenges to fulfill their duties which can be classified as follows:

- > Absence of or inadequate regulations
- > Cybersecurity and related fraud
- > Partnerships and outsourcing
- > Inadequate digital and financial literacy
- > Cross-border provision
- > Supervisor's capabilities

ABSENCE OF OR INADEQUATE REGULATIONS

Many FinTech products and services are not adequately covered by existing regulations. In most cases, FinTech products and services are developed and brought to the market well before these innovations are regulated. This lack of a suitable regulatory framework results in an uncertain environment for both FinTech firms and supervisors. In addition, some FinTech players engage in activities that span diverse financial segments, involving different authorities. This makes it more difficult to determine which authority should be the lead supervisor, particularly where the financial legislation has a focus on entities rather than activities.

Another factor is the institution-oriented approach of financial laws in many jurisdictions, which is not well suited for capturing the fluid range of activities of a FinTech firm and the adoption of an activity-based regulatory framework. The outcome is often

“overlapping regulations, sometimes unclear and that occasionally only cover certain aspects of FinTech-orientated business.”²⁷

As a result, it is not uncommon for FinTech firms to seek authorization from several authorities for their activities. Therefore, the supervisor faces the task of identifying which activities and players should be subject to supervision or, absent a clear remit, to monitor.

A more common example within the region are MNOs making available loans, micro-insurance and micro-pension products within their e-Money platforms. Although the provider of these other financial products are separately licensed companies, customers get the products, carry out transactions and handle queries through the e-Money app or cellular interface. On the other side, the e-Money provider interacts, directly or indirectly, with four different authorities: the central bank, insurance regulator, pension regulator and the telecommunications authority.

CYBERSECURITY AND RELATED FRAUD

Another area of concern is the higher inherent exposure of FinTech firms to cybersecurity risks compared to traditional financial institutions. The reliance on digital delivery and processing of their products and services make them especially vulnerable to these threats. Specific issues for supervisors are discussed in AFI's Guideline Note No. 37.²⁸



27 Afriwise. 2021. Catch me if you can: How regulators will impact Africa's FinTech sector. Available at: <https://f.hubspotusercontent30.net/hubfs/8209137/Catch%20me%20if%20you%20can%20-%20How%20regulators%20will%20impact%20Africas%20FinTech%20sector-4.pdf>

28 Alliance for Financial Inclusion. 2019. Cybersecurity for Financial Inclusion: Framework & Risk Guides. Available at: https://www.afi-global.org/wp-content/uploads/2020/07/AFI_GN37_DFS_AW_digital_0.pdf

A relevant topic is the adequacy of the cybersecurity mitigation framework. Even though FinTech products and services are equally or more susceptible to digital criminal threats as traditional financial institutions,²⁹ FinTech services providers may be not included in financial cybersecurity official response groups nor mandated to report incidents in real time. This exclusion may hamper the supervisor's overall cybersecurity strategy and hamper the ability of FinTechs to effectively provide financial inclusion.

PARTNERSHIPS AND OUTSOURCING

An additional issue is the interconnectedness of FinTechs with the traditional financial system. These interconnections can take several forms. In almost all cases, FinTech firms use bank services. In some instances, this is a regulatory requirement, such as rules mandating that E-money issuers secure client funds by placing them in trust accounts in banks.



More complex interactions occur when FinTech firms and traditional FIs form partnerships, allowing the former to provide products and services restricted to licensed institutions, such as loans, under operational agreements with banks. These raise issues regarding risk management and the distribution of responsibilities.

Another concern is the outsourcing of services by traditional FIs to FinTech firms. Banks may rely on FinTechs to provide them with non-traditional customer credit risk data, such as bill payment history. Vice versa, through open APIs, FinTechs may access and analyze the client data of FIs, such as savings and loan histories as well as transaction histories. Also, traditional FIs may integrate FinTech services to onboard clients remotely and perform e-KYC processes. Other commonly outsourced services are cloud computing and ensuring compliance with reporting obligations (RegTech).

More often than not, the supervisor lacks the legal mandate to directly inspect and evaluate risks at FinTech providers, instead relying on the supervised entities capability to properly assess the risks arising from these partnerships and outsourcing arrangements. This limitation occurs in the absence of specific regulations on outsourced services, as these external providers act as commercial entities rather than

financial services providers. Even where supervisors can exercise supervisory functions on outsourced firms, unique challenges arise, as discussed in AFI's document on Supervision of Outsourcing of Digital Services.³⁰



In this context, it is not unusual to see FinTech firms adopting fast-paced and aggressive marketing campaigns through social media networks, not usually tracked by supervisors. The messages conveyed often highlight fast account opening and the ease of use of products and services, compared to those of traditional FIs. This can be a problem if newly financially included customers lack adequate financial literacy and the technical skills to safely use their services and products.

These marketing strategies may overshadow traditional financial education programs, leading consumers with poor financial literacy, especially the unbanked and underbanked, to fall prey to unethical or fraudulent FinTech providers. Thus, supervisors in the region, as elsewhere, are now facing a fast-moving target in an unfamiliar terrain.

²⁹ Due to the digitization of their entire operations, see Buckley, Arner, Zetzsche, and Selga. 2019. The Dark Side of Digital Financial Transformation: The New Risks of FinTech and the Rise of TechRisk. European Banking Institute Working Paper Series.

³⁰ Alliance for Financial Inclusion. 2021. Supervision of Outsourcing of Digital Services by Banks. Available at: https://www.afi-global.org/wp-content/uploads/2021/04/AFI_ECAPI_outsourcing_CS_AW_digital.pdf

Among AFI members surveyed, the majority believe that traditional FIs adequately manage their overall risks from their engagement with FinTech firms. This level of confidence, however, diminishes sharply due to concerns about the abilities of banks to assess risks when using alternative credit assessment criteria or data provided by FinTech firms, as well as when those firms intervene in lending processes.

DIGITAL LENDING IN EGYPT

The Central Bank of Egypt (CBE), with a goal of enhancing access to credit while ensuring proper risk management, has been encouraging partnerships between FinTechs providing e-Money services and licensed FIs.

Through these partnerships, the CBE expects to ease loan applications and enhance credit risk assessments by sharing data between FinTechs and banks.

INADEQUATE DIGITAL AND FINANCIAL LITERACY

For many customers, unregulated FinTech products and services are indistinguishable from traditional financial instruments, as they provide the same or similar functionality. This blur extends to their providers. This situation, in some cases, is enhanced by financial education plans based on traditional financial products and conveyed through conventional communication channels. As a result, FinTech users may be led to falsely expect that they enjoy the same level of protection as users of regulated products.



The deployment of digital financial services without parallel efforts to improve digital literacy may also facilitate undesired or even harmful practices, such as sharing personal data or login credentials to online banking services (such as screen scraping), outside a formal open finance framework, with a FinTech provider to speed transactions.

MOZAMBIQUE'S UNLICENSED 'DIGITAL BANKS'

In 2021, the Central Bank of Mozambique (BoM) detected three unlicensed companies taking deposits online, branding themselves as digital banks.

In the midst of the pandemic, the firms were able to attract customers who opened accounts via mobile phones and web browsers, enticed by the higher interest rates than those offered by formal FIs.

Besides taking down the operations of these firms, the experience led the BoM to develop an online tool for submitting fraud claims, with the support of the public prosecutor, the telecommunications companies, and the financial system.

CROSS-BORDER PROVISION

The challenges mentioned above are heightened when FinTech services are provided by firms outside the supervisor's legal jurisdiction, which puts them in the position of being deemed responsible for actions taking place outside their sphere of control. Key areas of concern are the provision of financial services by non-resident firms, the handling of client data outside the jurisdiction, and reliance on essential services provided overseas.

Although not a new feature in financial services, FinTech developments are making it much easier for retail consumers in one jurisdiction to access services provided by a company in another. Therefore, this change in the cross-border provisioning of financial services demands an update to existing cooperation agreements.

Additionally, the widespread adoption by financial institutions of cloud-based services, often provided by overseas companies, and the role of large technological companies in the handling of personal data, and the international scope of cybercriminals, highlight the need for international collaboration among supervisors.

It is worth noting that most existing cooperation schemes among supervisors predate the emergence of FinTech. Also, there is a wide disparity in the regulatory treatment of these activities, in contrast with the more uniform approach to traditional financial services, in particular, within the Africa region.

SUPERVISOR CAPABILITIES

In the face of the above-mentioned challenges, supervisors in the region and elsewhere are assessing their capabilities to adequately monitor developments in FinTech. Most of the supervisors consulted are highly confident in their capabilities to supervise payments firms, as a result of over 15 years of experience, incremental regulatory developments, and intra-regional collaboration. On the other hand, crypto asset activities generally lie outside the scope of supervisors, with more research needed in this emerging digital finance space.

However, developments in other FinTech areas are broader and faster than those observed in mobile payments. These changes are absorbing a significant proportion of professionals with the required skillsets. In most countries, advanced and developing alike, the talent pool is rather small.



At the same time, the rate of growth in the industry surpasses those observed in other areas of the financial sectors. The African region has also been propelled by a significant influx of investments from outside the region.³¹

For supervisors facing budgetary and staff constraints, the arrival of new players offering an expanded range of products and services means an increase in responsibilities. However, it is unclear whether supervisors can get budget increases as the relative size of the FinTech industry is still small in terms of users and volumes compared with the traditional financial services sector. Supervisory authorities also face competition for scarce talent, which impacts staff recruitment as well as retention after providing the appropriate training.

Among other things, authorities are responding to this challenge by setting up dedicated FinTech units, where a small team can conduct research on associated topics, follow-up on developments, and engage with the industry. In some cases, these units are responsible for the licensing of FinTech firms, as well as supporting the expansion of policies and regulations, and even strengthening supervisory capabilities. This unit may also be considered the seed of an area fully devoted to supervising FinTech activity.

³¹ Findexable. 2021. Available at: https://findexable.com/wp-content/uploads/2021/07/Findexable_DIT-Africa_Report_FINAL_16Jul21.pdf

4 PRINCIPLES AND POLICY CONSIDERATIONS FOR THE SUPERVISION OF FINTECH IN AFRICA

4.1 KEY PRINCIPLES FOR THE SUPERVISION OF FINTECH ACTIVITIES

PROPORTIONALITY AS AN OVERARCHING PRINCIPLE FOR RESPONSIVE SUPERVISION TO FOSTER FINANCIAL INCLUSION

This overarching principle emphasizes that supervisors should consider the level of risk and economic impact of FinTech activities, recognizing that, in the region, these do not involve financial intermediation or maturity transformation.

Therefore, the supervisor must adapt their processes and allocate resources considering the risk profile of the FinTech firms under their supervision. As discussed in the previous section, FinTech activity risks in the region are mostly concentrated in transactions involving retail customers. This requires more intensive efforts to detect problems with a firm's ability to avoid market misconduct, as a failure to mitigate these risks has a significantly negative impact on financial inclusion.

This principle is also consistent with the BCBS Core Principles for effective banking supervision (BCBS, 2019),³² specifically Principle 8, Supervisory approach, as well as Recommendation 1 (Assessing risks and applying a risk-based approach) issued by the FATF in its 40 Recommendations.³³

TECHNOLOGY NEUTRALITY: A FINTECH SPECIFIC PRINCIPLE

A more specific principle for the supervision of FinTech activities is technology neutrality. This denotes that the supervisory process should focus on the functionality of the FinTech products and services, irrespective of the technology used. The experience with e-Money services in the region shows that allowing financial innovation based on new technologies can have substantial benefits to the economy and financial inclusion. But it is also important to recognize that these technologies are constantly evolving, for example, with the ongoing substitution of financial services based on text messages to more secure ones using data-intensive communication channels.

Technology neutrality is not yet considered an international standard. Instead, standard setting bodies and several national authorities explicitly state that their principles and processes are technology neutral. This includes the FATF standards,³⁴ and similarly, the Financial Stability Board, which in its assessment of the financial stability implications from FinTech,³⁵ recommends that supervisors adopt an approach that is technology neutral.



A technology neutral stance should provide supervisors more flexibility when monitoring FinTech activities, focusing their supervisory process reviews on financial risks arising from the activities and business lines rather than specific operational issues.

This also helps create a more suitable environment for the introduction of new technologies that may have a positive impact on financial inclusion.

It must be noted that not adhering to this principle may result in the supervisor engaging in understanding and analyzing a wide array of different technologies, demanding training programs or most probably hiring new, usually highly paid and specialized staff, with the corresponding budgetary consequences, further increasing demand for already scarce talent.

32 Basel Committee on Banking Supervision. 2019. Core Principles for effective banking supervision. Available at: https://www.bis.org/basel_framework/standard/BCP.htm

33 Financial Action Task Force. 2022. The FATF Recommendations. Available at: <https://www.fatf-gafi.org/media/fatf/documents/recommendations/pdfs/FATF%20Recommendations%202012.pdf>

34 Financial Action Task Force. 2021. Updated Guidance: A Risk-based Approach to Virtual Assets and Virtual Asset Service Providers. Available at: <https://www.fatf-gafi.org/media/fatf/documents/recommendations/Updated-Guidance-VA-VASP.pdf>

35 Financial Stability Board. 2017. Financial Stability Implications from FinTech. Available at: <https://www.fsb.org/wp-content/uploads/R270617.pdf>

COOPERATION AND COLLABORATION

As FinTech activities blur the traditional delimitations of financial markets and national boundaries, it is important to analyze developments and design policies with the widest view. For this purpose, supervisors should actively seek to exchange information and experiences on FinTech with other authorities, both within their jurisdiction and internationally.

Authorities should also consider joint approaches to supervise FinTech activities straddling different financial segments or those that operate across borders.

This principle is analogous to those recommended for banks by the BCBS's Core Principle 3 (Cooperation and collaboration) and the FATF's Recommendations 2 (National cooperation and coordination) and 40 (Other forms of international cooperation).

CLEAR SUPERVISORY PURVIEW AND ENFORCEMENT POWERS

To develop a set of effective policies, it is necessary that the legal framework affords the supervisor with an appropriate mandate to engage in the oversight of FinTech firms. Also, the regulatory framework must provide the authority with the powers to apply corrective actions, if required.



As with traditional financial institutions, the supervisor's goal is to ensure financial stability, through prudential supervision and consumer protection, through the supervision of market conduct. Given the evolving nature of FinTech activities, this will require a dynamic approach from the authorities, the use of technology in its processes, and continuous evaluation of emerging trends.

This principle is similar to BCBS's Core principles 1 (Powers) and 4 (Permissible activities), and the FATF's Recommendations 26 (Regulation and supervision of financial institutions) and 27 (Powers of supervisors).

Closely tied to FinTech activities, the FATF's Recommendations 14 (Money or value transfer services) and 15 (New technologies) address the need to monitor AML/CFT risks arising from firms providing e-Money and other payment-related services as well those from emerging technology-based products, services, and business models. Also, FATF's Guidance on Virtual

Asset Service Providers³⁶ provides applicable advice for supervising FinTech firms engaged in crypto asset activities.

Finally, FATF Recommendation 17 (Reliance on third parties) offers supervisors a checklist of elements to monitor when the onboarding of new customers is outsourced to specialized FinTech firms by traditional financial institutions and other FinTech firms.

THE CENTRAL BANK OF SEYCHELLES RISK ASSESSMENT OF CRYPTO ASSET EXCHANGES

Some of the largest global crypto asset exchanges are incorporated as international business companies in the Seychelles.

In this offshore corporate form, these firms do not operate in the country, therefore, they are not regulated nor supervised by the central bank. However, the authorities are currently undertaking an assessment of the risk of these entities in accordance with FATF guidance on Virtual Asset Service Providers.³⁷

If the report recommends that these crypto asset exchanges be included as part of the regulatory framework, the aim is to develop a national position with respect to these crypto asset exchanges and virtual assets in general.

³⁶ Financial Action Task Force. 2021. Updated Guidance: A Risk-based Approach to Virtual Assets and Virtual Asset Service Providers. Available at: <https://www.fatf-gafi.org/media/fatf/documents/recommendations/Updated-Guidance-VA-VASP.pdf>

³⁷ Ibid.

4.2 POLICY CONSIDERATIONS FOR FINTECH SUPERVISION IN AFRICA

The process of defining a set of policies to supervise FinTech should take into consideration the significance of FinTech activities, the general risk profile of these activities, as well as the principles discussed previously. In considering these elements for the region, market conduct supervision is highly relevant as consumer protection issues and other sources of financial harm for retail customers are current threats to financial inclusion.

On the other hand, prudential supervision of FinTech may, for the time being, be a less important priority, as long as client funds handled by firms are fully backed with deposits at banks. Nevertheless, this balance between the two supervisory perspectives should be constantly assessed over time, as new FinTech developments may blur distinctions with intermediating institutions. Also, supervisors must be aware of the role FinTech may have when providing core services to systemically significant financial institutions.

In this context, this framework presents a set of key policy topics that authorities should evaluate when seeking to define a strategy to engage in the supervision of FinTech, grouped into six pillars:



IDENTIFYING RISKS FROM FINTECH ACTIVITIES

- Monitor FinTech trends and risks
- Detect links FinTech -FIs
- Engage with the FinTech industry
- Consider formal test schemes

SELECTING A FINTECH APPROACH

- Apply existing approach
- Adopt activity-based approach
- Intervene in specific cases
- Seek regulatory reform

ASSESSING EXISTING SUPERVISORY FRAMEWORK

- Ascertain mandate scope/ enforcement powers
- Form an internal cross-functional group
- Set up specialized FinTech supervision section
- Engage with other local authorities
- Train staff on FinTech

PROMOTING REGIONAL COOPERATION

- Review current schemes
- Propose to map trends
- Collaboration in cross border deployments

AIMING FOR FINANCIAL INCLUSIVE SUPERVISION

- Use a risk-based approach
- Expect financial literacy commitments
- Measure impact on financial inclusion

CONSIDERING DEPLOYMENT OF SUPTECH TOOLS

- Market monitoring
- Sentiment analysis
- Automation of compliance related reporting
- Customer complaints data collection and analysis
- AI/NLP for document analysis

4.3 IDENTIFY RISKS FROM FINTECH ACTIVITIES

As an initial step, the supervisor should identify and estimate risk levels posed by different FinTech activities. This will help to identify regulatory gaps, determine key challenges, define goals, and focus resources in specific areas as well as lay the foundation for further actions.

The activities suggested include:

- > Monitor FinTech trends and related risks
- > Monitor links between FinTech and regulated FIs
- > Establish requirements on risk management to mitigate risks such as cybersecurity
- > Enhance cybersecurity and related fraud response capabilities
- > Closely engage with the FinTech industry
- > Consider setting up formal test schemes such as regulatory sandboxes

MONITOR FINTECH TRENDS AND RELATED RISKS

The supervisor should examine the local FinTech landscape to identify any relevant trends and understand the innovations taking place in the ecosystem, establish linkages to financial inclusion, and gauge the risks associated with each type of FinTech activity. These actions involve detecting the provision of unregulated products and services by local and foreign FinTech providers, and should convey any required supervisory actions and interventions needed by the authority.

These tasks require staff to search for these activities on digital channels, such as social media and online ads, in search engines and other platforms.³⁸ Although these actions may already be taking place to detect illegal financial activity, the objective should be broadened to gather information on FinTech activity in addition to enforcement purposes.

Social media networks provide timely and precise details of consumer protection issues, even from those affected who do not use formal complaints channels. Thus, monitoring the comments and complements of users facilitates the tasks of supervisors. The scale of customer mistreatment not reported to financial authorities in Kenya was revealed in a study in 2018 using a Twitter account to receive reports on poor e-Money services.³⁹ A larger study in Kenya, Nigeria, and Uganda is ongoing by Innovations for Poverty Action.⁴⁰ Central banks have also started to use social media chatbots to facilitate the reporting of customer complaints as a RegTech tool outside the region.⁴¹ This may be an area for supervisors in Africa to learn from other countries given the high social media usage across

Africa and the relative low cost of developing social media chatbot platforms.

The supervisor may also expand the information collected from supervised entities to gather data related to FinTech activities (FSI, 2020).⁴² This can include requiring supervised FIs to provide detailed information on transactions carried out on behalf of FinTech entities, such as client transfers. The supervisor may also engage in mystery shopping as well as systematic examinations of emerging themes.

This type of information may shed light on the relevance of activities outside the supervisor's remit, such as crowdfunding, unlicensed digital lenders, and offering crypto asset exchange services, as well as the potential solvency, liquidity, and market integrity risks involved.

MONITOR LINKS BETWEEN FINTECH AND REGULATED FIs

As part of the supervisory process of regulated FIs, examiners should look for the links between supervised entities and FinTech firms, which may span activities from providing deposit account services to FIs using Fintech firms for outsourcing key processes.



The identified links, and the risks assigned, should be recorded centrally to obtain an overall view of the interconnectedness of regulated FIs and the FinTech industry.⁴³

For the European Banking Authority, for example, although FinTech firms may not individually represent a source of systemic risk, their relationships with banks may at some stage, involve the provision of guarantees or liquidity, which could in aggregate, bring systemic risk.⁴⁴

38 World Bank. 2021. The Global Findex Database. Available at: <https://globalfindex.worldbank.org/>

39 Kenya Financial Sector Deepening. 2019. Did you see my tweet? Available at: https://s3-eu-central-1.amazonaws.com/fsd-circle/wp-content/uploads/2019/09/03134520/19-09-03_FSD_Social-Media-Report.pdf

40 Innovations for Poverty Action. 2022. Measurement of Consumer Protection Complaints on Social Media. Available at: <https://www.poverty-action.org/printpdf/43446>

41 See <https://bfa-global.com/r2a/insights/r2a-chatbot-prototype-helps-the-philippine-central-bank-sort-and-resolve-complaints/> and https://www.oecd.org/finance/financial-education/Effective-Approaches-FCP-Principles_Digital_Environment.pdf

42 Financial Stability Institute. 2020. Policy responses to fintech: a cross-country overview. Available at: https://www.bis.org/fsi/publ/insights23_summary.pdf

43 Financial Stability Board. 2017. Financial Stability Implications from FinTech. Available at: <https://www.fsb.org/wp-content/uploads/R270617.pdf>

44 Enria, A. 2018. Designing a Regulatory and Supervisory Roadmap for FinTech. Available at: <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/2151635/9aaf2e3f-e443-4d19-a1f5-fa57847e3e6a/Andrea%20Enria%27s%20speech%20on%20FinTech%20at%20Copenhagen%20Business%20School%20090318.pdf?retry=1>

A specific type of FinTech service - RegTech - is also relevant for supervisors. The term denotes technological applications that facilitate and ensure FIs (including FinTechs) compliance with regulations. While the firms offering this service do not directly provide products to customers, a review of RegTech tools in use by supervised FIs should be part of the risk assessment process.

ESTABLISH REQUIREMENTS ON RISK MANAGEMENT TO MITIGATE RISKS, SUCH AS CYBERSECURITY

FinTech products and services are fertile ground for the perpetration digital crimes, which may disproportionately affect the newly financially included. Thus, supervisors should promote and enhance collaboration with local and international cybercrime bodies to mitigate these emerging cybercrime risks. These efforts should also include coordination with the FinTech industry, setting up a threat-informed or intelligence-led cybersecurity framework and the use of assigned Chief Information Officers to report cybercrime in real-time.

However, these enhancements should be conceived to foster financial inclusion. For this purpose, it is important to adhere to the principles discussed in AFI's Guidelines Notes No. 37 (Cybersecurity for Financial Inclusion: Framework & Risk Guide)⁴⁵ and No. 43 (Guideline Note on Data Privacy for Digital Financial Services).⁴⁶

To manage cybersecurity related fraud, regulators should look at the CPMI toolkit for financial regulators to manage fraud within payment providers which can also be utilized for regulated or third-party fintech operators.⁴⁷ With the interconnectivity between FinTech firms and other financial institutions, cybersecurity-related fraud can result in not only fraud for customers or financial institutions but also reputational risks that can affect the broader ecosystem.

The CPMI toolkit includes five steps including:

- > promotion
- > initial stocktaking
- > engagement with stakeholders
- > development of an action plan
- > monitoring progress

CLOSELY ENGAGE WITH THE FINTECH INDUSTRY

The supervisor should be an active participant in FinTech forums, policy groups (e.g. payments councils) and other forms of public-private interactions between authorities and the FinTech industry. These platforms

are an opportunity to gain useful information on FinTech players, relationships with other relevant stakeholders (e.g. credit bureaus), and to convey concerns regarding general risks that are observed. These activities are similar to those recommended for regulators in AFI's Creating Enabling FinTech Ecosystems: The Role of Regulators report.⁴⁸



Creating Enabling Fintech Ecosystems: The Role of Regulators

> [View here](#)

THE VIEW FROM THE INDUSTRY

Two FinTech firms with operations across the region, MFS Africa and Wave, were asked for their views on how supervisors should engage with the sector.

Both highlighted the growing understanding by regulators of the characteristics of their activities. Nevertheless, the firms mentioned the uneven level of engagement across jurisdictions. In some, supervisors take an active role in gaining knowledge by setting up regulatory sandboxes and other forms of interaction.

In contrast, there are jurisdictions where authorities take a bank-centric approach, channeling all interactions with FinTech firms through partner banks. This lack of direct engagement with regulators may result in innovative products and services not being considered by the authorities if they pose a competitive challenge to traditional FIs.

45 Alliance for Financial Inclusion. 2019. Cybersecurity for Financial Inclusion: Framework & Risk Guides. Available at: https://www.afi-global.org/wp-content/uploads/2020/07/AFI_GN37_DFS_AW_digital_0.pdf.

46 Alliance for Financial Inclusion. 2021. Guideline Note on Data Privacy for Digital Financial Services. Available at: https://www.afi-global.org/wp-content/uploads/2021/02/AFI_GN43_AW3_digital.pdf

47 Committee on Payments and Market Infrastructures. 2019. Reducing the risk of wholesale payments fraud related to endpoint security: a toolkit. Available at: <https://www.bis.org/cpmi/publ/d188.pdf>

48 Alliance for Financial Inclusion. 2020. Creating Enabling FinTech Ecosystems: The Role of Regulators. Available at: <https://www.afi-global.org/publications/creating-enabling-fintech-ecosystems-the-role-of-regulators/>

CONSIDER SETTING UP FORMAL TEST SCHEMES, SUCH AS REGULATORY SANDBOXES

In this approach, the supervisor takes an active role in schemes, such as regulatory sandboxes and innovation hubs, set up by the authority to test FinTech products, services, and business models.

At the same time, this approach helps supervisors to gain insights on the tested activities, the management and backers of the tested firms, as well as general technical expertise. Further insights in setting up these schemes are discussed in AFI's Innovative Regulatory Approaches Toolkit.⁴⁹

THE ROLE OF SUPERVISORS IN REGULATORY SANDBOXES

Regulatory sandboxes and innovation hubs are being implemented in several countries in the region.

Among the regional authorities to have done so, the Central Bank of Egypt, Bank of Mozambique, National Bank of Rwanda and Bank of Uganda have included their supervisors in the monitoring of testing and an evaluation of the results though supervisors are not involved in managing the schemes.

4.4 SELECT A SUPERVISORY APPROACH TO FINTECH

The choices a supervisor will have when deciding which approach to take in supervising FinTech depends heavily on the regulatory framework for the sector. Thus, the stylized approaches listed here closely mirror the classification for regulatory approaches: hands off, case-by-case, structured experiments, risk-based, and single window.⁵⁰



As FinTech innovations allow non-financial companies to offer products and services that provide similar functionality to those provided by licensed FIs, supervisors should look at the activities a firm is engaged in, rather than its specific business classification.

An example is the role of MNOs in e-Money services. To the extent that the legislation allows, the approach should be consistent with the principles discussed in section four.

While a supervisor may choose to use different approaches depending on the type of FinTech activity, the legal system in the jurisdiction as well as the supervisor's capabilities will be a constraint on the options available.

The suggested approaches include:

- > adopt appropriate supervisory tools and approaches
- > adopt an activity-based approach
- > initiate supervisory actions on a case-by-case basis
- > undertake regulatory reform

APPLY AN EXISTING SUPERVISORY APPROACH

Under this approach, the supervisor applies the processes and tools to FinTech firms which already apply to traditional FIs. These include, among others, the following:

- > Vetting shareholders and officials during the licensing process as well as when there is a change of control.
- > Periodic assessments of the supervised FinTech risk profile, both through onsite examinations and offsite surveillance.
- > Evaluation of the corporate governance arrangements, risk management practices, and internal controls.
- > Collecting and analyzing financial conditions reports on the same basis as other supervised entities.
- > Supervisory actions if market misconduct is detected or if the supervised FinTech financial stability is deemed to be at risk.

This is the approach chosen by most surveyed AFI members, reflecting the maturity of the regulations for e-Money services in those jurisdictions, and is feasible where FinTech activities are well-defined in the regulatory framework, with a clear separation between different types of services, e.g. payments and lending, that a single entity can engage.

49 Alliance for Financial Inclusion. 2021. Innovative Regulatory Approaches Toolkit. Available at: <https://www.afi-global.org/publications/innovative-regulatory-approaches-toolkit/>

50 Ibid.

ADOPT AN ACTIVITY-BASED APPROACH

As FinTech innovations allow non-financial companies to offer products and services that provide similar functionality to those provided by licensed FIs, supervisors should look at the activities a firm is engaged in, rather than its specific business classification. An example is the role of MNOs in e-Money services.

To the extent that the legislation allows, the approach should be consistent with general principles: risk-based, technology neutral, and proportional.

FINTECH SUPERVISORY APPROACH IN NIGERIA

Within the Central Bank of Nigeria, FinTech firms are supervised by the Payments System Management Department.

Its supervisory approach emphasizes technological and infrastructure compliance by firms, as well as ensuring that client funds are matched to bank deposits. Two other supervisory departments, for banks and other financial institutions, use a different approach.

INITIATE SUPERVISORY ACTIONS ON A CASE-BY-CASE BASIS

Suitable for jurisdictions at an intermediate stage of FinTech market maturity, under this approach, a supervisor may conclude that FinTech activities in general do not require regular supervisory actions, unless risks posed by a specific FinTech product or service, a business model, or an individual provider, merit intervention. This approach may range from just requesting information from selected providers to coordinating simultaneous enforcement actions with other authorities.

However, the authority must ensure a coherent stance, in line with an activity-based approach. The supervisor should aim to have clear procedures to decide whether to intervene or not, based on an evaluation of the firm's activities and risk posed, treating all FinTech firms engaging in similar FinTech activities equally.

As regulations may be unclear or inexistent regarding the specific FinTech activity, this approach should be accompanied by an analysis by the regulator on whether to develop corresponding rules.

UNDERTAKE REGULATORY REFORM

The supervisor may conclude that there are FinTech activities posing risks to customers and to financial stability that cannot be addressed under the current regulatory framework, and may justify this decision from an analysis of the risks a FinTech activity entails, the connections to other supervised entities, or as a result of agreements with other authorities, following the processes discussed in the following section.

This route was taken by many supervisors in the last decade to ensure that e-Money services were adequately overseen. In our discussions with officials from central banks across the region, this option is being considered with regards to new digital lenders, especially P2P lenders, and crypto assets.

4.5 ASSESS THE EFFECTIVENESS OF THE EXISTING SUPERVISORY FRAMEWORK AND DEFINE A SUITABLE INSTITUTIONAL ARRANGEMENT

The supervision of FinTech activities calls for a holistic view, with the participation of staff from several departments within the organization. Structures based on institutional lines (commercial banks, non-banks, etc.) usually struggle to fit most FinTech within a single department. The role of technology also distances FinTech from other financial institutions, demanding a more active involvement of IT professionals, instead of playing a supporting role.



As a first step towards defining a suitable institutional arrangement, supervisors should review the regulatory framework, to ascertain the scope and enforcement powers of their mandates with respect to FinTech activity.

They should also examine the governance arrangements for the supervisory and oversight units, avoiding any dispersion of responsibilities for FinTech between different units.

FinTech is an evolving industry. Similarly, internal structures will need to adapt as well, with supervisors experimenting with different arrangements to properly supervise FinTech.

Among the actions taken by supervisors in the region, these are the most common:

- > Review the internal capacity, mandate, and capability to supervise FinTech
- > Set up appropriate institutional arrangements
 - Set up an internal cross-functional team
 - Set up a specialized FinTech supervision unit
- > Establish formal arrangements with other regulators and policymakers

REVIEW THE INTERNAL CAPACITY, MANDATE, AND CAPABILITY TO SUPERVISE FINTECH

The supervisor should proactively seek to enhance the skills required for the appropriate oversight of FinTech activities. This encompasses understanding the range of products, services, and business models associated with FinTech, as well as the underlying technologies. These training programs should cover all relevant staff, as the innovations may be adopted by traditional FIs.

Authorities may seek to benefit from various capacity building initiatives on FinTech by AFI, combining the network expertise of its members and outside specialists.⁵¹ Other international organizations, such as the IMF, also offer regular training courses on FinTech.



Staff training programs may be accompanied by industry-wide FinTech training initiatives. This may help reduce the average staff training costs and foster high standards among FinTech personnel.

SET UP APPROPRIATE INSTITUTIONAL ARRANGEMENTS

Set up an internal cross-functional team

Where FinTech activities are incipient, and the supervisor is in the early stages of involvement, establishing a cross-functional group is the recommended path, as this will allow staff with different expertise relevant to FinTech (IT, payments, cybersecurity, financial risks) to interact and reach an integrated view.⁵²

Set up a specialized FinTech supervision section where possible

In jurisdictions with an active and growing FinTech industry, a dedicated group or department should be set up focused on the supervision of FinTech. This task may be assigned to an existing area or the creation of a new specialized unit. The former is best suited when significant FinTech activities (e.g. payments) are already actively being overseen by the supervisor.

Depending on staff availability, relevance, and level of the perceived risk of FinTech activities in the country, the new specialized unit, should in turn, liaise with the FinTech unit mentioned above.

As staff in this section acquires knowledge of FinTech and related supervisory skills, it is advisable that members of this unit provide training to employees in other departments, using training programs involving activities further discussed below.

An additional function of this section may be to assess technology applications for supervisory processes and SupTech, as discussed in Section 4.5.⁵³

BANGKO SENTRAL NG PILIPINAS FINTECH OFFICE

The central bank of the Philippines has assigned responsibility for supervising FinTech firms to the Technology Risk and Innovation Supervision Department (TRISD), within the Financial Supervision Sector.

Originally in charge of onsite and offsite IT supervision across all regulated entities and cybersecurity surveillance, in recent years, its responsibility has expanded to cover FinTech activities.

TRISD also engages in other FinTech related tasks: FinTech policy research, promoting digital innovation in financial services through periodic contacts with FinTech stakeholders, development and implementation of regulatory sandboxes, and coordinating with other BSP units in charge of digital and financial literacy initiatives.

ESTABLISH FORMAL ARRANGEMENTS WITH OTHER REGULATORS AND POLICYMAKERS

In recognizing that in most cases, FinTech activities transcend traditional institutional arrangements, supervisors must actively engage with other financial and non-financial authorities: insurance, capital markets, data privacy, consumer protection, competition, telecommunications, digitalization, financial inclusion, cyber security, and market integrity, to name the most relevant.⁵⁴

52 For further details, see: Alliance for Financial Inclusion. 2021. Supervision of Outsourcing of Digital Services by Banks. Available at: https://www.afi-global.org/wp-content/uploads/2021/04/AFI_ECAPI_outsourcing_CS_AW_digital.pdf

53 International Monetary Fund. 2020. Institutional arrangements for Fintech regulation and supervision. Available at: <https://www.imf.org/en/Publications/fintech-notes/Issues/2020/01/09/Institutional-Arrangements-for-Fintech-Regulation-and-Supervision-48809>

54 Financial Stability Institute. 2021. Supervising cryptoassets for anti-money laundering. Available at: <https://www.bis.org/fsi/publ/insights31.pdf>

These mechanisms should extend to authorities in other countries, to acknowledge that national boundaries do not deter the provision of FinTech products and services.



Cooperation agreements may also help with the interchange of information on new technologies and business models, as well as sharing experiences on their approaches.

These mechanisms acquire more relevance if large non-financial global companies, such as MNOs or Big Tech, own or are controlling stakeholders of local FinTech. The existing international arrangements for supervising international financial groups are generally inadequate when the parent is not a supervised financial institution in their home country.

TANZANIA'S TASK FORCE ON CBDC AND CRYPTO ASSETS

The Bank of Tanzania formed a task force that will advise the government on policy, legislation and guidelines to enable blockchain technology and related products and services to be used effectively within the country.

The working group comprises several government departments and financial regulators, reflecting the multiple dimensions of these activities.

The group is inviting providers as well as users to understand the market before taking any further steps. Also, the study is looking at the CBDC's business case in the market and developing a roadmap.

4.6 PROMOTE REGIONAL AND SUB-REGIONAL COLLABORATION IN FINTECH SUPERVISION

As mentioned above, FinTech activities in the region transcend national borders, with many players operating in several jurisdictions and others providing services to customers in countries outside their operating bases. Consequently, supervisors in different countries are facing similar challenges and seeking information on the same entities. However, this international dimension of FinTech is not adequately reflected in current cooperation mechanisms and accords, as reported by AFI members:

To close this gap, supervisors in the region are looking at the following actions:

- > Review and update existing cooperation mechanisms
- > Conduct joint mapping of FinTech activities in the region and sub-region
- > Seek collaborations in cross-border deployments

REVIEW AND UPDATE EXISTING COOPERATION MECHANISMS

Most MOUs between supervision authorities date from before the emergence of FinTech, and are thus not adequate to handle the current challenges. On the other hand, a new wave of FinTech specific MOUs refer to information exchange and, in other regions, to mutual recognition of FinTech licenses.

Supervisors in the region should aim to review current agreements to identify changes to recognize FinTech-specific characteristics and cross-border dimensions.



As in the case with standard supervisory MOUs, these agreements should allow for seamless information sharing on FinTech firms.

TABLE 6: INTERNATIONAL COOPERATION AGREEMENTS COVERING FINTECH

TYPE OF AGREEMENT	YES	IN PROGRESS	NO
As part of a general MOU	44%	12%	44%
FinTech specific	22%	11%	67%
Regional or global initiatives on FinTech services	22%	33%	45%

Source: Survey of AFI Africa members 2022.

Among the topics that could be included in enhanced MOUs are cooperation in learning and exchanges on FinTech supervision and joint supervisory exercises on FinTech firms operating across borders.

CONDUCT JOINT MAPPING OF FINTECH ACTIVITY IN THE REGION AND SUB-REGION

Faced with similar challenges and the same players, supervisors should engage with their counterparts, at a regional or sub-regional level, to identify the risks brought about by FinTech activities.

Such exercises can jointly identify the range and significance of emerging FinTech activities, to detect gaps in the regulatory frameworks that may allow unlicensed firms to operate across borders, and to assess remote distribution channels.

These exercises will develop a better understanding of the risks posed by FinTech while promoting communication channels to rapidly tackle issues with specific FinTech firms.

SEEK COLLABORATIONS IN CROSS-BORDER DEPLOYMENTS

Supervisors should be able to obtain information and opinions on FinTech firms based in other African countries intending to start operations in their jurisdiction from their counterparts. This should extend to firms applying for licenses, to those providing services remotely, and to providers not seeking authorizations.

4.7 PROMOTE A FINANCIALLY INCLUSIVE FRAMEWORK

The role of FinTech in promoting financial inclusion may be hindered by inadequate regulatory and supervisory frameworks. For the supervisor, when defining how FinTech activities will be supervised, it is important to consider issues what may affect the development of a healthy and inclusive FinTech industry and the attractiveness of their products and services to the unserved and underserved. These key issues are:

- > adopt a risk-based approach
- > establish requirements on digital financial literacy, consumer protection and market conduct
- > establish requirements on quality of services

ADOPT A RISK-BASED APPROACH

FinTech should be treated as any other financial activity, hence, a risk-based approach is justified. In most scenarios, FinTech products and services specifically targeting the financially excluded have very

specific inherent risk. Also, in most cases, the providers do not have the complexity of a full-service traditional bank. Therefore, the supervisory intensity should reflect these features.

On the other hand, some FinTech products and services may potentially be harmful for their users, requiring a stricter monitoring of consumer protection and market conduct. It is important to recognize that there may be a gap between sophisticated FinTech products and the financial and digital literacy skills of its users among vulnerable groups, such as illiterate women. This gap should be considered by supervisors when monitoring compliance with gender-sensitive consumer protection frameworks.

FINTECH PERFORMANCE REGARDING MARKET CONDUCT AND CONSUMER PROTECTION

Fifty-six percent of the surveyed AFI members believe that FinTech firms do worse in terms of consumer protection and market conduct compared to traditional FIs, while just 11 percent believe they do better.

According to the interviewed officials, this reflects customer dissatisfaction with the level of fees and the lack of transparency on how they are set. Another issue is the poor and unclear handling of complaints, particularly when FinTech firms distribute loans granted by FIs.

ESTABLISH REQUIREMENTS ON DIGITAL FINANCIAL LITERACY, CONSUMER PROTECTION, AND MARKET CONDUCT

The supervisor should explicitly let FinTech providers know that it expects clear commitments to be given to customers, especially the newly included, along with appropriate and relevant educational features that promote safe and responsible digital finance practices. Those supervised must understand that an evaluation of these commitments will be included in the supervisory process, as part of an assessment of market conduct and consumer protection risks.

Also, the supervisory process should include monitoring and evaluating marketing practices by FinTech firms, to detect material detrimental of sound digital practices, as well as misleading promotions of unregulated products and services.

The supervisor should also check that FinTech firms clearly identify the originator that distributes the products and services.

Mandatory participation in national financial education campaigns and the prominent display of links on this topic to the public resources of authorities should be considered. Some regulators are making use of chatbots to not only support digital financial literacy but also improve consumer complaint management (e.g. Bangko Sentral ng Pilipinas and Bank Al-Maghrib).

The supervisor must promote the fact that a FinTech firm is supervised to provide potential customers with confidence that their funds are safe, and that authorities will monitor that they are being treated fairly. This may be achieved by mandating the display of the condition of being a supervised entity and through financial literacy programs, explaining the role of the supervisor as part of the financial consumer safety net or even the development of a FinTech Code of Conduct (e.g. FinTech Lenders Association in Indonesia or the National Internet Finance Association of China).

ESTABLISH REQUIREMENTS ON QUALITY OF SERVICES

The supervisor should assess that risk management processes at FinTech firms are clearly focused on providing high quality services to their customers. As many products and services are relatively new, FinTech providers must have adequate controls in place to avoid negative outcomes for their clients which can have a detrimental effect on financial inclusion.

There are three main areas of concern: a lack of interest to expand access, inappropriate practices that result in financial harm to customers, and non-conducive marketing practices in the use of financial products. These issues reflect on the level of unresolved customer complaints, larger than usual proportion of dormant or underused accounts, and low level of new customers among segments with low levels of inclusion.



Data to measure these trends are usually included in the set of information available from the supervised entities, and thus, should allow supervisors to develop indicators to assess the effectiveness of a supervised FinTech in promoting financial inclusion in their offsite surveillance.⁵⁵



National Financial Inclusion Strategy Monitoring and Evaluation Toolkit

> [View here](#)

Publishing these results could be useful in providing a reputational boost to those FinTech firms that are successfully promoting financial inclusion goals.

4.8 CONSIDER THE DEPLOYMENT OF SUPTECH TOOLS

The supervisor should explore the use of technological solutions to automate, streamline and speed supervisory tasks. This category of tools, SupTech, defined as the use of technology to specifically support supervisory activities,⁵⁶ allow the revamping of existing processes, freeing staff from tedious undertakings, and allowing for more timely assessments and actions.



Regulatory and Supervisory Technologies for Financial Inclusion

> [View here](#)

55 Alliance for Financial Inclusion. 2021. National Financial Inclusion Strategy Monitoring and Evaluation Toolkit. Available at: https://www.afi-global.org/wp-content/uploads/2021/02/AFI_FIDWGFISPLG_toolkit_AW_digital.pdf

56 Alliance for Financial Inclusion. 2022. Regulatory and Supervisory Technologies for Financial Inclusion. Available at: <https://www.afi-global.org/publications/regulatory-and-supervisory-technologies-for-financial-inclusion/>

These can be implemented regardless of the approach chosen, with a varying degree of usefulness. Some are relevant for both regulatory and supervisory functions. At their core, most SupTech tools aim to facilitate the collection, validation, classification, and analysis of data.⁵⁷

It is important to note that SupTech can be an effective tool in aligning the supervision of FinTech activities with the promotion of financial inclusion, as these tools are particularly well suited to monitor market conduct issues and the detection and prevention of financial crimes.⁵⁸

Examples on SupTech tools within the AFI regional network include the Bank of Ghana's Online Regulatory and Analytical Surveillance Software (ORASS), National Bank of Rwanda's Electronic Data Warehouse system, and Central Bank of Nigeria's APIs and Data Stack.

PROJECT ELLIPSE - A MODEL FOR CROSS-BORDER SUPTECH

In March 2022, the Bank for International Settlements and the Monetary Authority of Singapore unveiled a proof of concept for a SupTech tool designed to combine structured data provided automatically by FIs and unstructured data collected by the tool itself (news reports, documents, etc.).

The aim was to create a prototype of a system that collects data, performs analysis and identifies risk correlations, alerting authorities of developments or issues that demand supervisory attention.

The prototype was developed with the participation of 24 financial authorities, including four AFI members, and the BIS is making it available to other supervisors.⁵⁹

EXPLORE THE USE OF TECHNOLOGICAL SOLUTIONS TO STREAMLINE AND SPEED UP SUPERVISORY TASKS

The supervisor should have contingency plans that include alternatives to onsite examinations. These may comprise more frequent reporting, secure communication channels to perform interviews and meetings between examiners and FinTech firm management, as well as temporary remote access to specific databases.

THE CENTRAL BANK OF NIGERIA'S EXPERIENCE DURING THE PANDEMIC

The Payments System Management Department faced the challenge of issuing licenses under the regulations approved just before the start of the pandemic.

The standard protocol contemplated applicants coming into the CBN offices to demonstrate new products and services. The movement restrictions prompted the CBN to switch to online demonstrations.

Also, the standard procedure for granting an "approval in principle" required an onsite assessment of the applicant's environment and infrastructure to ensure adherence to safety requirements and business continuity plans. The CBN issued these orders based on remote assessments.

In parallel, the CBN asked for payments services provision to be designated as a critical activity to avoid interruptions in infrastructure maintenance.

CREATE AN ENABLING ENVIRONMENT WHICH ALLOWS FOR REAL-TIME REPORTING

The flow for data may be inverted when using SupTech tools. Instead of the supervised entities submitting periodic pre-formatted reports, an application may pull all relevant data directly from the FinTech firm's IT systems.

By deploying SupTech tools, supervisors may be able to get the information needed to assess risks before the condition of affected FinTech firms put their viability at risk. This also allows supervisors to follow the impact of emergencies on supervised FinTech as the situation unfolds.

At the same time, the capabilities of the supervisor to continuously monitor their condition may propel supervised FinTech firms to improve their risks management procedures.

57 Toronto Centre. 2017. FinTech RegTech and SupTech - What They Mean for Financial Supervision. Available at: <https://res.torontocentre.org/guidedocs/FinTech%20RegTech%20and%20SupTech%20-%20What%20They%20Mean%20for%20Financial%20Supervision%20FINAL.pdf>

58 For further details on the use of SupTech, see: Alliance for Financial Inclusion. 2022. Regulatory and Supervisory Technologies for Financial Inclusion. Available at: <https://www.afi-global.org/publications/regulatory-and-supervisory-technologies-for-financial-inclusion/>

59 Bank for International Settlements. 2022. Project Ellipse An integrated regulatory data and analytics platform. Available at: <https://www.bis.org/publ/othp48.htm>

BANK OF TANZANIA'S REAL-TIME REPORTING

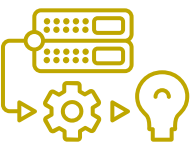
The central bank is developing advanced RegTech and SupTech solutions to retrieve data from financial service providers in real time.

The project was approved and is expected to be completed in two or three years.

The solution will include tools to automate the process and analysis of the data gathered, as the number of supervised entities increase, with more complex relationships.

These tools also allow gathering data in granular form, without any aggregation, thus, facilitating the validation of its consistency. Some tools also allow the supervisor to see the real-time evolution of transactions, such as the real-time monitoring of virtual asset exchanges. The scope and granularity of the data obtained through this mechanism may be expanded during emergencies to cope with limitations to onsite examinations.

Another set of tools can help the supervisor to transform the data gathered into useful and actionable information. Data analytics technologies widely used in FinTech, such as Big Data, machine learning, and others, can provide offsite analysts with signals of risky trends and timely warnings.



Data analytics technologies widely used in FinTech, such as Big Data, machine learning, and others, can provide offsite analysts with signals of risky trends and timely warnings.

Tools using natural language processing may combine unstructured data captured outside the FinTech firm (e.g. public reports, corporate websites, online news, social media, etc.) and from internal documents (e.g. previous examinations reports, external audits, etc.) with the data gathered from the FinTech, to detect inconsistencies and other relevant events for the supervisor. Several supervisors are using this set of SupTech tools to check compliance with market conduct regulations.⁶⁰

Some deployments of SupTech tools even allow the conducting of fully remote examinations, thus, significantly increasing the efficiency and speed of the supervisory process.

NATIONAL BANK OF RWANDA (NBR)'S ELECTRONIC DATA WAREHOUSE (EDW)

The NBR developed a SupTech tool to gather data directly from the IT systems of supervised institutions, including regulated FinTech firms.

This allows the supervisor to ensure quality and consistency, while speeding up the reception of reports.

The NBR also uses the data to efficiently allocate supervisory resources according to risk levels, and monitors financial inclusion advances through the data pulled from the FIs.

The pandemic prompted interest in expanding the tool to allow for remote supervision.

Although SupTech tools are intended for all supervised entities, FinTech firms are particularly well-suited as test beds for SupTech deployment. The modern IT systems, small size, and technology savvy management of these firms provide supervisors with the opportunity to test SupTech solutions before extending their use to traditional FIs.

60 FinCoNet. 2020. SupTech Tools for Market Conduct Supervisors. Available at: http://www.finconet.org/FinCoNet-Report-SupTech-Tools_Final.pdf

5 CONCLUSIONS

Many countries in Africa have already witnessed how the introduction of innovative services, such as E-Money, can enhance access to much needed financial services to the unserved and underserved, driving financial inclusion ratios upward sustainably.

On the other hand, the advent of FinTech products, services, and business models are undoubtedly introducing additional risks into the financial system and bringing significant new challenges to supervisors in the Africa region and elsewhere.

As this policy framework demonstrates, by carefully developing a suitable approach and introducing changes to supervisory methods and tools, authorities can ensure that the potential benefits offered by FinTechs to promote financial inclusion are achieved in a responsible manner.



6 ANNEXES

The following AFI members and partners institutions participated in in-depth interviews for the development of the policy framework.

- > Banco de Moçambique
- > Central Bank of Nigeria
- > National Bank of Rwanda
- > Central Bank of Seychelles
- > Bank of Tanzania
- > Bank of Uganda
- > Central Bank of Egypt
- > MFS Africa
- > Wave

7 ACRONYMS

AFI	Alliance for Financial Inclusion
AML/CFT	Anti-Money Laundering/Counter-terrorism Financing
API	Application Programming Interface
BaaS	Banks as a Service
BaaSP	Bank as a Platform
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
CICO	Cash In-Cash Out
CPMI	Committee on Payments and Market Infrastructures
DFS	Digital Financial Services
E-Money	Electronic Money (including mobile e-Money)
FATF	Financial Action Task Force
FI	Financial institution
FinCoNet	International Financial Consumer Protection Organization
FSB	Financial Stability Board
FSI	Financial Stability Institute
GSM	Global System for Mobile Communications Association
IMF	International Monetary Fund
MNO	Mobile Network Operator
P2P	Person-to-Person
SIM	Subscriber Identity Module
SME	Small and Medium Enterprise
SMS	Short Messaging Service
USSD	Unstructured Supplementary Service Data

8 REFERENCES

Alliance for Financial Inclusion. 2019. Guideline Note No. 37. Cybersecurity for Financial Inclusion: Framework & Risk Guides. Available at: https://www.afi-global.org/wp-content/uploads/2020/07/AFI_GN37_DFS_AW_digital_0.pdf

Alliance for Financial Inclusion. 2020. Creating Enabling Fintech Ecosystems - The Role of Regulators. Available at: https://www.afi-global.org/sites/default/files/publications/2020-01/AFI_FinTech_SR_AW_digital_0.pdf

Alliance for Financial Inclusion. 2020. Digital Credit Regulation in Tanzania. Case Study. Available at: https://www.afi-global.org/sites/default/files/publications/2020-11/AFI_DFS_Tanzania_CS_AW2-digital.pdf

Alliance for Financial Inclusion. 2021. National Financial Inclusion Strategy Monitoring and Evaluation Toolkit. Available at: https://www.afi-global.org/wp-content/uploads/2021/02/AFI_FIDWGFISPLG_toolkit_AW_digital.pdf

Alliance for Financial Inclusion. 2021. Guideline Note No. 43. Guideline Note on Data Privacy for Digital Financial Services. Available at: https://www.afi-global.org/wp-content/uploads/2021/02/AFI_GN43_AW3_digital.pdf

Alliance for Financial Inclusion. 2021. Innovative Regulatory Approaches Toolkit. Available at: <https://www.afi-global.org/publications/innovative-regulatory-approaches-toolkit/>

Alliance for Financial Inclusion. 2021. Supervision of Outsourcing of Digital Services by Banks. Case Study. Available at: https://www.afi-global.org/wp-content/uploads/2021/04/AFI_ECAPI_outsourcing_CS_AW_digital.pdf

Alliance for Financial Inclusion. 2022. Regulatory and Supervisory Technologies for Financial Inclusion. Available at: <https://www.afi-global.org/publications/regulatory-and-supervisory-technologies-for-financial-inclusion/>

Alliance for Financial Inclusion. 2022. Sochi Accord FinTech for Financial Inclusion. Available at: https://www.afi-global.org/wp-content/uploads/2022/09/Sochi_Accord-22_stg3.pdf

Africa FinTech Network. 2021. Africa Fintech Radar. Africa FinTech Network.

Afriwise. 2021. Catch me if you can: How regulators will impact Africa's FinTech sector. Available at: <https://f.hubspotusercontent30.net/hubfs/8209137/Catch%20me%20if%20you%20can%20-%20How%20regulators%20will%20impact%20Africas%20FinTech%20sector-4.pdf>

Ahmad, A., Green, C., and Jiang, F. 2020. Mobile Money, Financial Inclusion and Development: A review with reference to African experience. *Journal of Economic Surveys*, 753-792.

Banco Central do Brasil. 2021. APS-Siscom - Sistema Integrado de Suporte e Comunicação da Supervisão. Available at: <https://www.bcb.gov.br/estabilidadefinanceira/sistemacomunicacaosupervisao>

Basel Committee on Banking Supervision. 2016. Guidance on the application of the Core Principles for Effective Banking Supervision to the regulation and supervision of institutions relevant to financial inclusion. Available at: <https://www.bis.org/bcbs/publ/d383.htm>

Basel Committee on Banking Supervision. 2019. Core Principles for effective banking supervision. Available at: https://www.bis.org/basel_framework/standard/BCP.htm

Bank for International Settlements. 2022. Project Ellipse An integrated regulatory data and analytics platform. Available at: <https://www.bis.org/publ/othp48.htm>

Briter Bridges. 2022. Africa Investment Report 2021. Available at: <https://briterbridges.com/reports>

Buckley, R. P., Arner, D. W., Zetsche, D. A., & Selga, E. 2019. The Dark Side of Digital Financial Transformation: The New Risks of FinTech and the Rise of TechRisk. *European Banking Institute Working Paper Series*.

Catalyst Fund. 2021. The State of Fintech in Emerging Markets. Available at: <https://bfaglobal.com/catalyst-fund/insights/the-state-of-fintech-in-emerging-markets-report/>

Claessens, S., and van Horen, N. 2014. The Impact of the Global Financial Crisis on Banking Globalization. IMF Working Paper (WP/14/197).

Committee on Payments and Market Infrastructures. 2019. Reducing the risk of wholesale payments fraud related to endpoint security: a toolkit. Available at: <https://www.bis.org/cpmi/publ/d188.pdf>

Disrupt Africa. 2022. African Tech Startups Funding Report 2021. Disrupt Africa. Available at: <https://disruptafrica.gumroad.com/l/hheig>

Emmanuel, O. 2022. NASENI Laments The Dominance of Foreigners in Nigeria's Fintech Space. Available at: <https://www.tekedia.com/naseni-laments-the-dominance-of-foreigners-in-nigerias-fintech-space/>

Enria, A. 2018. Designing a Regulatory and Supervisory Roadmap for FinTech. Available at: <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/2151635/9aaf2e3f-e443-4d19-a1f5-fa57847e3e6a/Andrea%20Enria%27s%20speech%20on%20FinTech%20at%20Copenhagen%20Business%20School%20090318.pdf?retry=1>

Ernst & Young. 2020. NIGERIA FINTECH CENSUS 2020. EY.

Faria, J. 2021. Number of fintech startups in Africa from 2017 to 2021. Available at: <https://www.statista.com/statistics/1249957/number-of-fintech-startups-in-africa/#statisticContainer>

Financial Action Task Force. 2017. Anti-Money Laundering and Terrorist Financing Measures and Financial Inclusion. Available at: <https://www.fatf-gafi.org/media/fatf/content/images/Updated-2017-FATF-2013-Guidance.pdf>

Financial Action Task Force. 2021. Updated Guidance: A Risk-based Approach to Virtual Assets and Virtual Asset Service Providers. Available at: <https://www.fatf-gafi.org/media/fatf/documents/recommendations/Updated-Guidance-VA-VASP.pdf>

Financial Action Task Force. 2022. The FATF Recommendations. Available at: <https://www.fatf-gafi.org/media/fatf/documents/recommendations/pdfs/FATF%20Recommendations%202012.pdf>

FinCoNet. 2020. SupTech Tools for Market Conduct Supervisors. Available at: http://www.finconet.org/FinCoNet-Report-SupTech-Tools_Final.pdf

Findexable. 2021. Available at: https://findexable.com/wp-content/uploads/2021/07/Findexable_DIT-Africa_Report_FINAL_16Jul21.pdf

Financial Stability Board. 2017. Financial Stability Implications from FinTech. Available at: <https://www.fsb.org/wp-content/uploads/R270617.pdf>

Financial Stability Board. 2021. FinTech. Available at: <https://www.fsb.org/work-of-the-fsb/financial-innovation-and-structural-change/fintech/>

Financial Stability Institute. 2020, January. Policy responses to fintech: a cross-country overview. Available at: https://www.bis.org/fsi/publ/insights23_summary.pdf

Financial Stability Institute. 2021. Supervising cryptoassets for anti-money laundering. Available at: <https://www.bis.org/fsi/publ/insights31.pdf>

GSM Association. 2019. The Mobile Money Regulatory Index. GSMA. Available at: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/03/Mobile-Money-Regulatory-Index-2019.pdf>

GSM Association. 2021. Mobile Money Metrics. Available at: <https://www.gsma.com/mobilemoneymetrics/#regulatory-index?y=2020>

GSM Association. 2021. The Mobile Economy: Sub-Saharan Africa 2021. Available at: https://www.gsma.com/mobileeconomy/wp-content/uploads/2021/09/GSMA_ME_SSA_2021_English_Web_Singles.pdf

Hammerschlag, Z., Bick, G., and Da Silva Luiz, J. 2020. The internationalization of African fintech firms: marketing strategies for successful intra-Africa expansion. *International Marketing Review*.

Innovations for Poverty Action. 2022. Measurement of Consumer Protection Complaints on Social Media. Available at: <https://www.poverty-action.org/printpdf/43446>

International Monetary Fund. 2020. Institutional arrangements for Fintech regulation and supervision. Available at: <https://www.imf.org/en/Publications/fintech-notes/Issues/2020/01/09/Institutional-Arrangements-for-Fintech-Regulation-and-Supervision-48809>

International Monetary Fund. 2022. Financial Access Survey. Available at: <https://data.imf.org/?sk=E5DCAB7E-A5CA-4892-A6EA-598B5463A34C&slid=1390030109571>

Kenya Financial Sector Deepening. 2019. Did you see my tweet? Available at: https://s3-eu-central-1.amazonaws.com/fsd-circle/wp-content/uploads/2019/09/03134520/19-09-03_FSD_Social-Media-Report.pdf

Mas, I., & Radcliffe, D. 2011. Mobile Payments Go Viral: M-PESA in Kenya. *Journal of Financial Transformation*, 169-182.

Pilling, D. 2021. African start-ups attract international investors – but need local ones too. *Financial Times*. Available at: <https://www.ft.com/content/566fc2a5-6df4-4145-8157-99d4eb8da4c1>

Reuters. 2021. Africa's digital payments race becomes a scramble. Available at: <https://www.reuters.com/breakingviews/africas-digital-payments-race-becomes-scramble-2021-05-05/>

Sy, A., Maino, R., Massara, A., Perez-Saiz, H., and Sharma, P. 2019. FinTech in sub-Saharan African countries: a game changer? Available at: <https://www.imf.org/-/media/Files/Publications/DP/2019/English/FTSSACEA.ashx>

Toronto Centre. 2017. FinTech RegTech and SupTech - What They Mean for Financial Supervision. Available at: <https://res.torontocentre.org/guidedocs/FinTech%20RegTech%20and%20SupTech%20-%20What%20They%20Mean%20for%20Financial%20Supervision%20FINAL.pdf>

World Bank. 2020. World Bank Open Data. Available at: <https://data.worldbank.org/>

World Bank. 2021. Remittances Prices Worldwide. Available at: <https://remittanceprices.worldbank.org>

World Bank. 2021. The Global Findex Database. Available at: <https://globalfindex.worldbank.org/>

World Bank. 2021. The Next Wave of Suptech Innovation. Available at: <https://elibrary.worldbank.org/doi/abs/10.1596/35322>

World Bank. 2021. The Role of Mobile Money Regulations: Evidence from Sub-Saharan Africa. Available at: <https://globalfindex.worldbank.org/sites/globalfindex/files/referpdf/FindexNote7.pdf>

Yermack, D. 2018. FinTech in Sub-Saharan Africa: What Has Worked Well, and What Hasn't. NBER Working Paper (No. 25007).

Alliance for Financial Inclusion

AFI, Sasana Kijang, 2, Jalan Dato' Onn, 50480 Kuala Lumpur, Malaysia
t +60 3 2776 9000 e info@afi-global.org www.afi-global.org

 Alliance for Financial Inclusion  AFI.History  @NewsAFI  @afinetwork