afi

ECAPI Eastern Europe Central Asia Policy Initiative

FINANCIAL INNOVATIONS FOR FINANCIAL INCLUSION

SPECIAL REPORT

CONTENTS

ACKNOWLEDGMENTS

This special report is a product of the Eastern Europe and Central Asia Policy Initiative (ECAPI) and its members.

Contributors:
From the AFI Management Unit: Led by Arsen Aramyan (Central Bank of Armenia) with contributions from Shoira Raximjonova (Central Bank of Uzbekistan) and Gulbakyt Isayeva (Agency of the Republic of Kazakhstan for Regulation and Development of Financial Market).

From the AFI Management Unit: Arif Nasibov (Regional Manager, Eastern Europe & Central Asia (EECA)).

We would like to thank AFI member institutions, partners, and donors for generously contributing to the development of this publication and for completing the survey, which both contributed to and guided its content.

FOREWORD

AFI member countries continue to drive steady advances in expanding access, usage of, and the quality of financial services, efforts that have already brought over 800 million adults into the formal financial sector.

Many of these advancements were made possible by leapfrogging traditional financial services through new and innovative solutions. Mobile money, agent banking, QR code payments, and other innovations have been instrumental in extending financial access to the unbanked and underserved populations and businesses.

The ongoing disruption of the financial, along with other sectors, continues to generate new ideas and innovations across different parts of the world. Many of these developments hold strong potential for advancing financial inclusion in AFI member jurisdictions and beyond. However, knowledge about these technological, business, and other innovations remains scattered across the world and varies in terms of implementation maturity.

Not all innovations have the same impact on access, usage, and the quality of financial services. Some initially appeared promising but proved to be cost ineffective when implemented. Given the limited resources available, it is unrealistic to expect stakeholders to adopt a test-and-learn approach to every innovation that may potentially benefit financial inclusion. At the same time, without a proper assessment, the true impact of an innovation remains unknown. In this context, AFI's network-centric model provides unique value by enabling the practical exploration and sharing of tested knowledge.

To this end, AFI undertook a network-wide exercise to gather expertise, experience, and insights into various innovations and their potential to facilitate access to finance. Some of these innovations may not be considered "new" in jurisdictions where they are already implemented at scale and integrated into daily life, such as buy now, pay later or credit scoring. At the same time, given the diverse structure of the AFI network, there is value in demonstrating these solutions for members who may not yet be familiar with them.

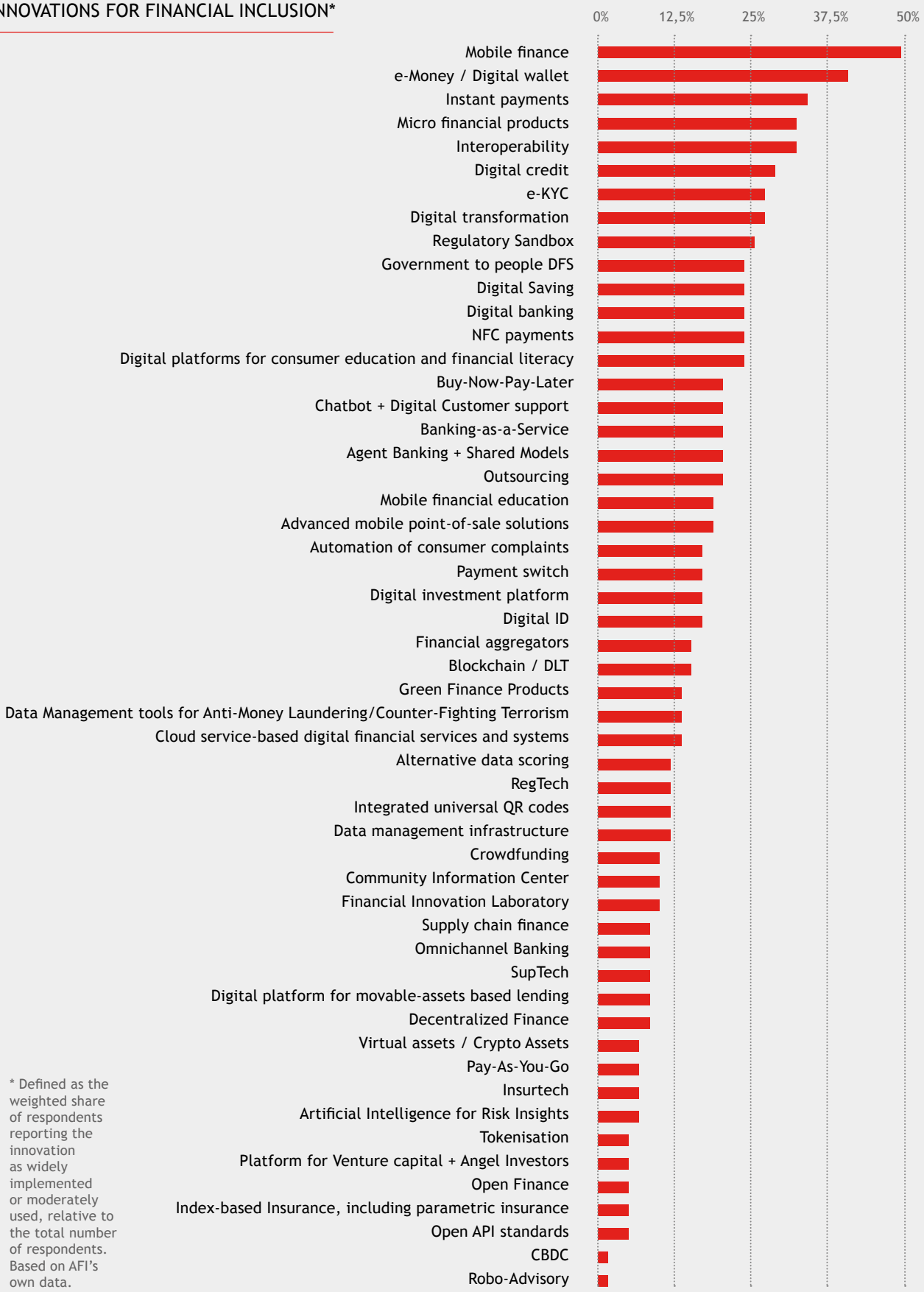
This report serves as a potential "compass" for AFI members, stakeholders, and the public to navigate promising innovations that support financial inclusion. Like any compass, for each indicated innovation it highlights only the key navigational data, i.e. overview, potential impact on financial inclusion, key enabling factors, and relevant country examples to encourage cross-border learning. The content is deliberately kept concise to provide a clear and practical overview for policy decisions. Readers seeking further details are encouraged to explore additional resources, including AFI's knowledge products.

We acknowledge that new ideas to enhance financial inclusion emerge constantly, making it impossible to cover them all in one report. This document focuses on key innovations with strong potential to support inclusion. Other innovations such as financial products for SMEs and women entrepreneurs, standardized loan applications, and others will be explored in a future report. In the meantime, stakeholders are encouraged to contribute to the future report(s) by sharing innovations or insights through the following survey: www.surveymonkey.com/r/FinancialInnovationforFinancialInclusion

We believe that the knowledge collected through this initiative will further support AFI members in leapfrogging financial inclusion by effectively applying the relevant innovations in their jurisdictions. The report can promote a forward-looking approach and visionary mindset among members. It is also expected to further advance conducive regulatory environments that support access to finance through financial innovations, while also seeking to galvanize coordination and cooperation with other stakeholders to ensure these innovations deliver broad public benefits.

The report also supports the implementation of AFI's Sochi Accord on Inclusive FinTech, which calls on members to build and strengthen institutional capacity and talent to better understand technological complexities and business model innovations, enabling appropriate regulatory interventions.

ADOPTION MATURITY OF FINANCIAL INNOVATIONS FOR FINANCIAL INCLUSION*



* Defined as the weighted share of respondents reporting the innovation as widely implemented or moderately used, relative to the total number of respondents. Based on AFI's own data.

ANTICIPATED IMPACT OF FINANCIAL INNOVATIONS ON FINANCIAL INCLUSION*

* The chart illustrates the impact of various innovations across three dimensions of financial inclusion, as reported by respondents to the AFI network-wide survey conducted in November-December 2024. For more details on these dimensions, please refer to the AFI Core Set Policy Model (2019). The x-axis represents the Access dimension of financial inclusion, the y-axis reflects the Usage dimension, while the size of each bubble indicates the Quality dimension. The assigned numerical values were calculated as the proportion of all assessments received relative to the maximum allowable score. Bubble sizes were further adjusted to enhance the visibility of proportional differences.

FINANCIAL INNOVATIONS

hadynyah/iStock

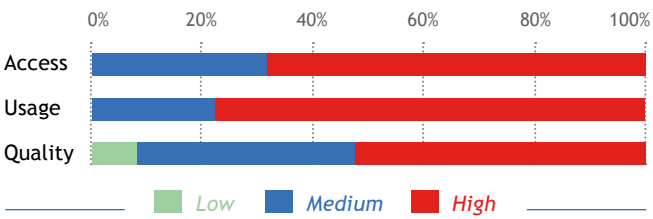
AGENT BANKING

The agent banking model allows banks to provide financial services through non-bank agents, such as grocery stores, retail outlets, post offices, pharmacies, or lottery kiosks, enabling service expansion into areas where opening a branch is not viable, which is the case in rural and low-income areas, where a high percentage of people remain unbanked.


Shutterstock

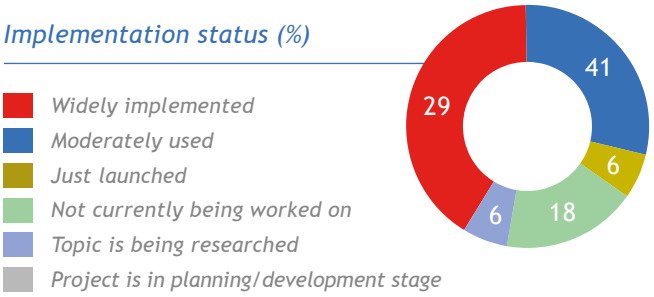
How the innovation advances financial inclusion: Agent banking plays a significant role in advancing financial inclusion, notably by improving access to and usage of financial services, benefiting both commercial banks and customers. For banks, agent banking reduces the costs associated with establishing and operating physical branches. For customers, it lowers travel expenses to reach bank branches and increases the convenience of accessing financial services locally. By reducing financial and logistical barriers, agent banking helps expand access to essential financial services. However, its impact on the quality of services remains limited. For agent banking to make a substantial contribution to financial inclusion, agents must be equipped to offer a broad range of financial services that meet the needs of the population.

Impact on financial inclusion

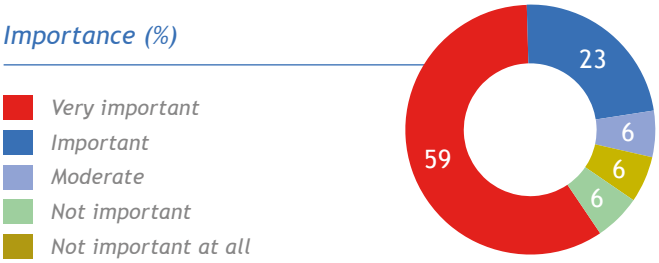


Innovation in practice: This innovation is relatively mature, with many countries either widely implementing agent banking or using it at a moderate level. Financial regulators generally consider it important or very important for advancing financial inclusion in their jurisdictions.

Implementation status (%)



Importance (%)



Key policy enablers: Easing barriers for new entrants (e.g. through special licensing regimes), regulatory compliance, interoperability, clear compensation and service arrangements, robust risk management, security, liquidity requirements

Key market enablers: Scattered locations with low population density, operational costs, trained agent networks, mobile banking, digital infrastructure (e.g. mobile networks), real-time data sharing

Key driving forces: Consumers, payment service providers, financial institutions, and central banks

Selected Jurisdictions of Reference: Bangladesh, Brazil, Colombia, Ghana, India, Kenya Malaysia, Mexico, Nigeria, Papua New Guinea, the Philippines, Singapore, Tanzania, Uganda

Relevant AFI knowledge products:

Agent banking in Latin America

Developing an Agent Registry System as a RegTech Tool in the Philippines

Nigeria's National Strategy Leveraging Agent Networks for Women's Financial Inclusion

Regional Policy Framework to Strengthen Agent Networks for Digital Financial Services

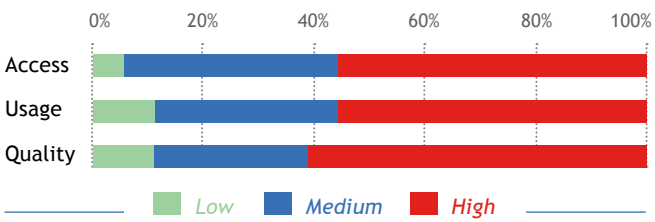
ALTERNATIVE DATA SCORING

Alternative data scoring enables lenders to assess a borrower's creditworthiness using information beyond traditional credit reports which mainly based on loan and repayment behavior. This includes non-traditional data such as spending patterns, utility and bill payments, rental history, childcare expenses, alternative loan types, bank account balances, educational background, employment and income data, social media activity, and other relevant information. These sources establish the lender's confidence in a borrower's ability and willingness to repay a loan.

How the innovation advances financial inclusion: Integrating alternative data into credit scoring is a key step toward more inclusive financial systems. For individuals without traditional credit histories, such as young adults or immigrants, it may be the only way to access credit and financial services. This approach can also increase loan approval rates, as conventional credit reports often overlook important indicators of financial behavior. For example, proof of steady income and a strong rental payment history may support approval even without a formal credit record.

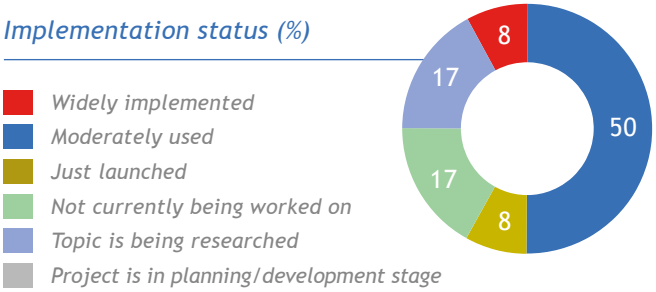
Alternative data credit scoring is particularly valuable in emerging and developing economies, where many people lack access to formal lending or have limited experience with traditional financial institutions. In such contexts, relying solely on conventional data credit scoring would delay financial access for individuals until they have built a sufficient credit history, often a lengthy process. By leveraging a wider range of data, this innovation also enhances the overall quality of financial services through more accurate and personalized assessments.

Impact on financial inclusion

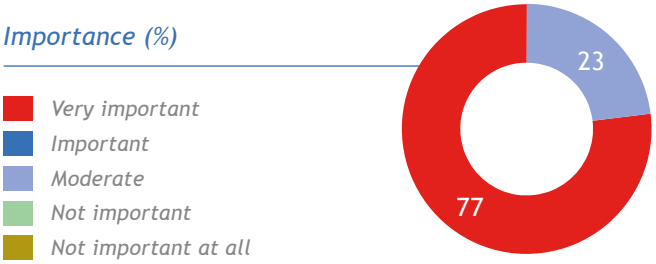


Innovation in practice: Alternative data scoring models are being widely explored across the AFI network, with promising results expected soon, as members recognize their importance in advancing financial inclusion.

Implementation status (%)



Importance (%)



Key policy enablers: Accuracy, fairness, and privacy within the credit reporting ecosystem, compliance on the part of providers with regulations by excluding full-file public records that could unfairly bias credit decisions, consumer consent regulations, fairness in credit decisions (especially when using alternative data sources), open finance frameworks, data protection frameworks

Key market enablers: Artificial intelligence (AI) and machine learning (ML), smartphone penetration, digital infrastructure, access to alternative data (e.g. mobile money transactions, utility payments, social media activity), and big data infrastructure

Key driving forces: Credit reporting service providers, payment service providers, data analytics companies, credit providers, central banks, ministries of finance, and data privacy authorities

Selected Jurisdictions of Reference: Brazil, China, European Union, Ghana, Hong Kong, India, Kenya, Nigeria, the Philippines, United Kingdom, United States

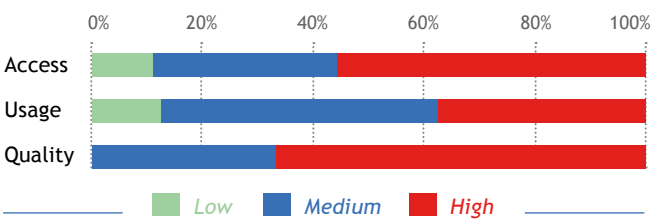
Relevant AFI knowledge products:
Alternative Data for Credit Scoring

ARTIFICIAL INTELLIGENCE IN RISK INSIGHTS

AI is increasingly used as a powerful tool in risk management across sectors. Through advanced analytics, machine learning, and predictive modeling, AI can identify, assess, and mitigate risks with high accuracy and efficiency. These systems analyze large volumes of data to detect patterns, anticipate issues, and support proactive decision-making. The goal is to strengthen risk mitigation, improve operational resilience, and enable data-driven decisions. Importantly, AI models must offer transparency, while recommendations should be auditable and explainable as much as possible, and not operate as a complete black box.

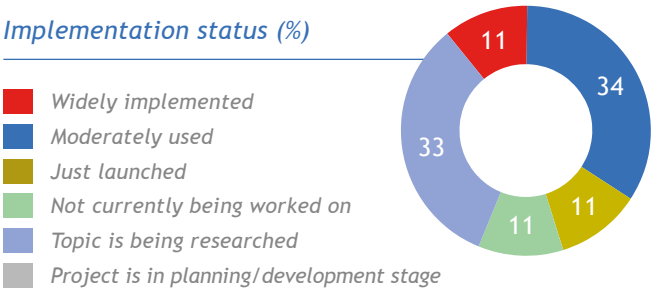
How the innovation advances financial inclusion: The use of AI in risk management offers significant benefits for financial inclusion, particularly by improving the quality of financial services. AI enhances the quality of risk assessment, fraud detection, and regulatory compliance, making credit more accessible and affordable. In credit evaluation, AI draws on both traditional and alternative data, such as social networks and mobile transactions, to provide more accurate and fair assessments, especially for individuals without formal credit histories. AI also strengthens fraud detection by identifying suspicious activities in real time, reducing financial losses, and building trust in digital services. By automating regulatory compliance, it helps institutions meet legal requirements while lowering operational costs. AI's predictive analytics support better decision-making by anticipating market shifts and asset risks. Faster, more precise loan approvals improve access to credit for underserved populations, particularly in rural areas. Enhanced risk assessment and automation reduce service costs, leading to lower interest rates and fees, while AI-driven fraud protection safeguards vulnerable users, reinforcing confidence in digital transactions. It also supports the development of personalized financial products, such as microloans and flexible credit terms, tailored to those with irregular incomes. As AI models continue to improve, financial services become more inclusive, efficient, and responsive to diverse needs.

Impact on financial inclusion

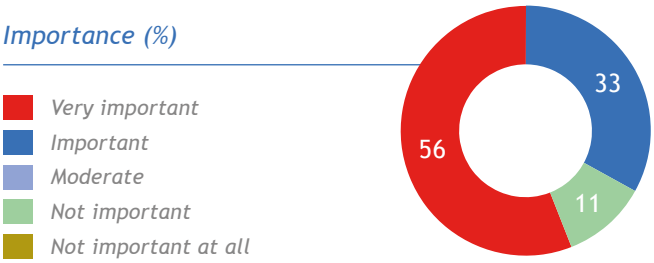


Innovation in practice: AI in Risk Insights is gaining global traction. While 33 percent of respondents are still researching its potential, 34 percent have already begun moderate use. Additionally, 56 percent recognize it as very important, highlighting AI's growing role in improving accuracy, efficiency, and financial inclusion. As adoption expands, AI is expected to become a key driver of innovation in financial risk management.

Implementation status (%)



Importance (%)



Key policy enablers: Clear regulations and policies (essential for the responsible use of AI in financial services), ethical guidelines to ensure transparency and fairness, data governance frameworks to safeguard security and compliance, regulatory clarity on AI-driven data use (supporting trust and accountability), risk assessment frameworks to help identify and mitigate AI-related risks, responsible AI adoption policies, strategic AI laws driving innovation and ethical finance

Key market enablers: Data availability and infrastructure, AI/ML service providers, collaboration between FinTech firms, AI/ML tech companies, and traditional banks, cloud and high-performance technologies, data infrastructure, data centers, high-performance computing, large datasets

Key driving forces: Markets, central banks, securities and exchange commissions, insurance commissions, national communications authorities, telecommunication regulatory authorities

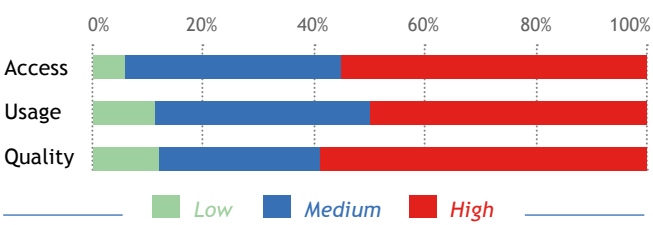
Selected Jurisdictions of Reference: Egypt, Singapore, United States, Zimbabwe

AUTOMATION OF CONSUMER COMPLAINTS

Consumer complaint automation leverages technologies such as AI/ML to efficiently manage, process, and resolve issues, aiming to increase efficiency while addressing resource limitations. The first stage of automation typically involves complaint categorization, either through user-selected categories or by using natural language processing (NLP) tools that analyze and free text submissions. Once categorized, complaints are prioritized so appropriate specialists can be promptly engaged based on the severity of the issue. In the financial sector, regulators may focus on automating complaints submitted through official consumer protection channels while also encouraging market participants to adopt compatible complaint automated systems, which can facilitate the collection and analysis of complaint data, enhancing regulatory insight and institutional responsiveness. Another important outcome of automation is access to relevant complainant and case information, allowing different teams and support channels to respond effectively without requiring complainants to repeat their concerns.

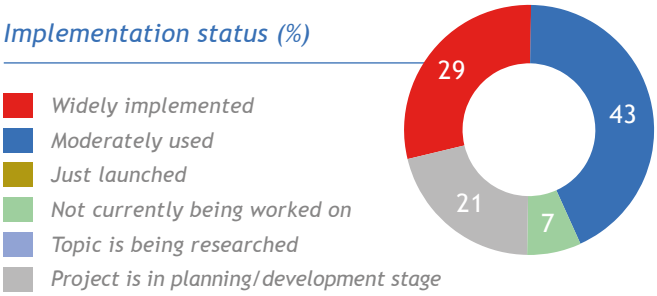
How the innovation advances financial inclusion: AFI network regulators view this innovation as highly beneficial across all pillars of financial inclusion. Automation significantly shortens response and resolution times, improves customer satisfaction, and eases the burden on specialized staff. It can also flag vulnerable complainants early in the process, enabling tailored support from the outset, ensuring their concerns are heard and promptly addressed. Indirectly, complaint automation enhances the access pillar by incorporating consumer feedback to close service gaps and develop new access channels in response to demand. It supports usage by strengthening trust in financial services through timely, positive resolution of complaints. Most directly, it improves the quality of financial services by giving providers a clearer understanding of consumer needs, helping them adjust products accordingly. A strong majority of AFI survey respondents rated this innovation as impactful or very impactful for advancing financial inclusion.

Impact on financial inclusion

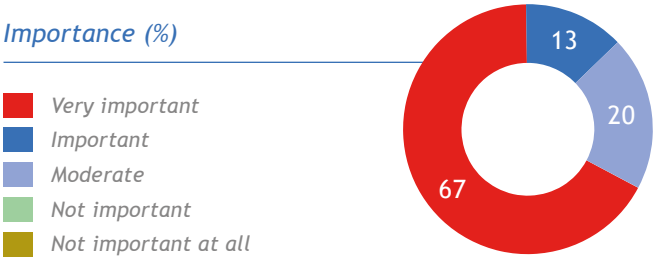


Innovation in practice: The innovation has been implemented by over 70 percent of AFI network respondents, with more than 20 percent currently developing related projects, and the majority considering it very important within their jurisdictions.

Implementation status (%)



Importance (%)



Key policy enablers: Regulations on cybersecurity, operational resilience, consumer protection, data privacy and security, digital grievance redressal, and ensuring fairness in addressing consumer complaints

Key market enablers: AI/ML tools, advanced CRM providers and talent, consumer awareness, strong internet and mobile network infrastructure, access to data analysis tools, robust cybersecurity to protect consumer data and prevent fraud, integration of AI and NLP, consumer assistance mechanisms (including online buddy systems and other traditional channels such as email and walk-ins)

Key driving forces: Financial regulators, ministries of science and technology, FinTech companies, empowered consumers, market demand

Selected Jurisdictions of Reference: Australia, Canada, European Union, Ghana, the Philippines, United States, United Kingdom

Relevant AFI knowledge products:
Complaint Handling in Central Bank Toolkit
Complaint Handling In Central Bank Framework

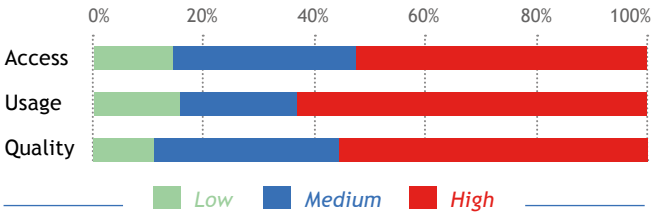
BANKING AS A SERVICE

Banking as a Service (BaaS) is a business model that enables non-banking companies to offer digital banking products and services through API technology or platforms. Also known as banking as a platform or embedded banking, it is a specific subtype of embedded finance. BaaS is especially useful in the e-commerce and retail sectors, where players seek to differentiate themselves and build customer loyalty through added services and greater convenience. By allowing non-financial companies to provide banking services, BaaS reduces the friction in consumer journeys, improves engagement, and helps modernize traditional banking infrastructure.

How the innovation advances financial inclusion: AFI members generally recognize the medium to high impact of BaaS on financial inclusion, notably in improving access to and the quality of financial services. For unbanked and underbanked populations, these partnerships provide easier access to tailored financial services. The combination of FinTech innovation and traditional banking capabilities through BaaS creates a powerful formula for advancing financial inclusion.

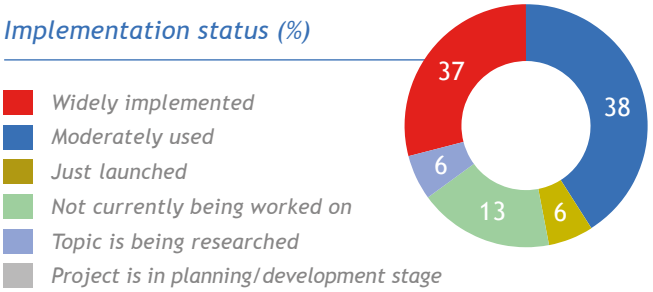
A key strength of BaaS is in its ability to bridge traditional banking systems with the innovations of FinTech startups. By incorporating FinTech into their portfolios through BaaS, banks can address unmet needs in the financial ecosystem and further promote inclusion. BaaS also enhances the quality of financial services by enabling faster product launches by leveraging APIs. For instance, a FinTech startup can quickly integrate banking features into its app, such as digital wallets or payment processing, significantly reducing time-to-market.

Impact on financial inclusion

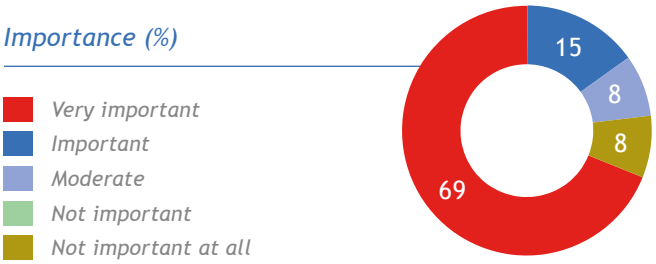


Innovation in practice: The majority of financial regulators in the AFI network recognize the significant importance of BaaS for financial inclusion, with 75 percent of respondents reporting that the innovation is either widely implemented or moderately used in their countries.

Implementation status (%)



Importance (%)



Key policy enablers: Open finance regulations, compliance and due diligence, KYC, embedded finance, agent banking, digital banking licensing regimes, interoperability, consumer protection policies

Key market enablers: Core banking software with API support, FinTech ecosystems, flexible digital financial infrastructure and technology, BNPL, e-commerce, strategic partnerships with technology service providers, widespread internet coverage, availability of cloud service providers

Key driving forces: FinTech companies, market demand, central banks, ministries of IT, ministries of finance, ministries of science and technology

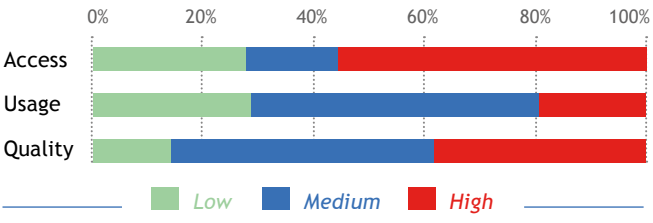
Selected Jurisdictions of Reference:
European Union, India, Mexico, Singapore, United States

BLOCKCHAIN (DLT)

Distributed ledger technology (DLT), including blockchain, is a decentralized digital ledger system (i.e. data storage organized by accounts) that enables secure, transparent, and tamper-proof transactions without the need for intermediaries. This innovation allows real-time recording of transactions across multiple locations, improving the efficiency of financial systems and also supports peer-to-peer transactions, digital identity management, and smart contracts, helping to make financial services more accessible and streamlined, particularly for unbanked populations.

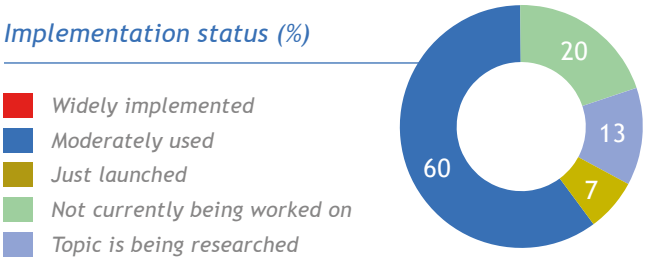
How the innovation advances financial inclusion: AFI members generally believe that DLT-based finance offers value for the access pillar of financial inclusion, with impact on usage and quality pillars estimated at a moderate level. DLT can reduce barriers to inclusion by enabling individuals without traditional bank accounts, especially in remote or underserved areas, to access financial services. Removing intermediaries lowers transaction costs, making services more affordable for low-income users. Its inherent transparency and immutability builds trust and promotes greater participation in financial systems, while also enabling microfinance opportunities such as microloans and peer-to-peer lending that empower small businesses and individuals with limited credit access. DLT's secure nature further protects users' data and funds, reducing fraud risks and enhancing confidence in digital transactions.

Impact on financial inclusion

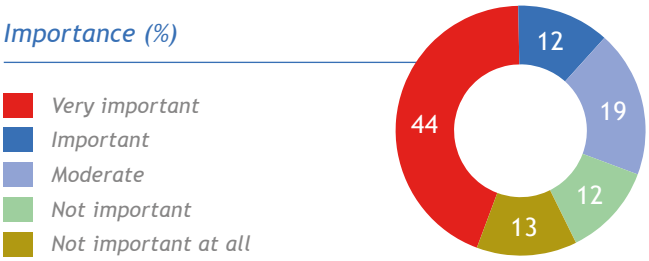


Innovation in practice: Currently, the innovation is largely implemented at a moderate level, with many regulators still uncertain about the full potential of DLT-based finance. While there is recognition of its importance, practical use cases are still emerging and require further exploration.

Implementation status (%)



Importance (%)



Key policy enablers: Robust digital identity systems, interoperability, legal recognition of smart contracts, cybersecurity policies, anti-money laundering (AML) and counter financing of terrorism (CFT) regulations

Key market enablers: Reliable internet and mobile communications, financial literacy, financial products leveraging DLT, incubators and accelerators for FinTech, reliable electricity network, high technological literacy, DLT talent and ecosystem, use cases for blockchain and DLT technologies, digital and mobile banking, open API standards, mobile payments

Key driving forces: Market demand for secure and transparent systems, tech companies, cybersecurity authorities, central banks, ministries of IT, ministries of finance, securities and exchange commissions

Selected Jurisdictions of Reference: Cambodia, Estonia, Ghana, India, Kenya, Nigeria, Switzerland, United States

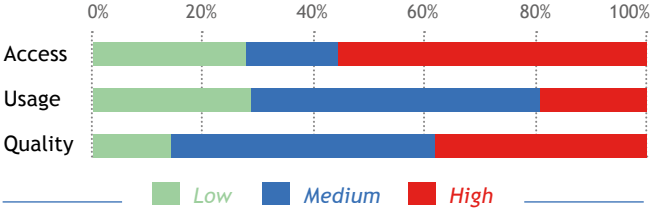
BUY-NOW-PAY-LATER

Buy Now Pay Later (BNPL) is a consumer financing option that allows individuals to split the cost of purchases into interest-free installments, tailored to their preferences. It begins with selecting the BNPL option at the point of sale (POS), typically on a merchant's website or app. Users are then directed to the BNPL provider's platform to create an account and undergo a soft credit check for approval. Once approved, consumers can choose their payment terms and complete the purchase.

How the innovation advances financial inclusion: BNPL is one of the most in-demand financial services among vulnerable populations, especially in rural and low-income areas. When supported by BNPL, more commerce can occur, opening opportunities for the use of other financial products and services. While quality may be moderately impacted because BNPL can rely on simple means like pen and paper, new technologies such as mobile apps and DLT can greatly enhance the service in contexts with adequate resources.

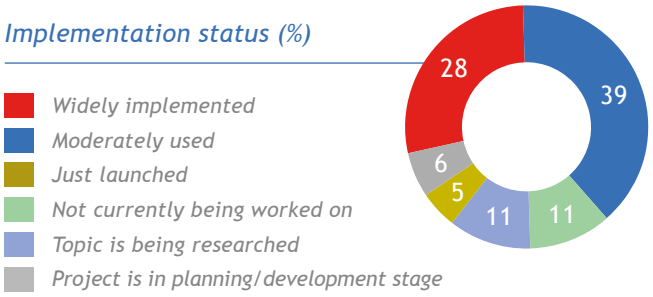
BNPL is designed to be a low-cost and flexible alternative to traditional credit products, offering zero to low-interest financing typically split into four or fewer installments, ensuring transparency and predictability for consumers. BNPL providers primarily generate revenue through merchant and late-payment fees rather than interest charges, making it a generally interest-free option for consumers if payments are made within the grace period. BNPL typically offers shorter credit tenures than credit cards, usually up to 60 days. These features (interest-free terms and short tenure) make BNPL accessible and appealing to a wide range of consumers, including those without credit cards, while transactions often involve smaller amounts. Overall, BNPL benefits consumers by offering a low-cost, flexible lending option with simple terms and a convenient digital experience, increasing both convenience and financial flexibility for shoppers.

Impact on financial inclusion

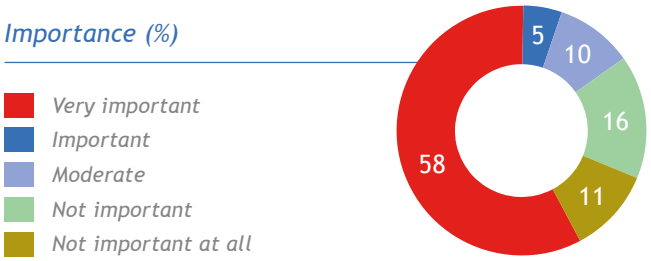


Innovation in practice: The majority of AFI member respondents consider this innovation important for financial inclusion. BNPL is also gaining traction in AFI member jurisdictions, with 67 percent of respondents indicating that it is either widely implemented or moderately used.

Implementation status (%)



Importance (%)



Key policy enablers: Payment system regulation, consumer credit regulation, data protection laws

Key market enablers: Technology infrastructure, quality and accessible mainstream and alternative scoring solutions, developed FinTech communities, customer-centric product designs, public awareness and education campaigns

Key driving forces: Market demand, e-commerce growth, shifts in consumer behavior, central banks, ministries of finance, ministries of science and technology

Selected Jurisdictions of Reference: Cambodia, Germany, Indonesia, Norway, Sweden, Tajikistan, United States

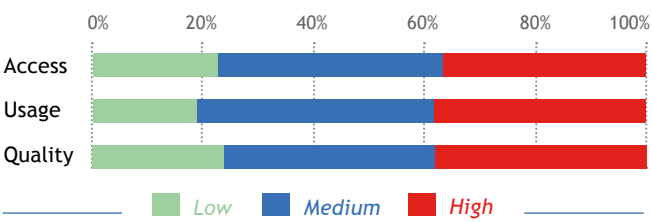
CENTRAL BANK DIGITAL CURRENCY

Central Bank Digital Currency (CBDC) is a new form of electronic central bank money. In this model, digital money accounts are held directly by consumers at the central bank, ensuring accessibility and stability regardless of intermediaries. CBDCs can take the form of either retail or wholesale digital currencies. Retail CBDC is broadly accessible to the public and supports a wide range of use cases such as retail transactions and peer-to-peer payments, directly impacting money demand and supply. Wholesale CBDC, on the other hand, is used for interbank transfers and related high value transactions settled in central bank reserves.

Shutterstock

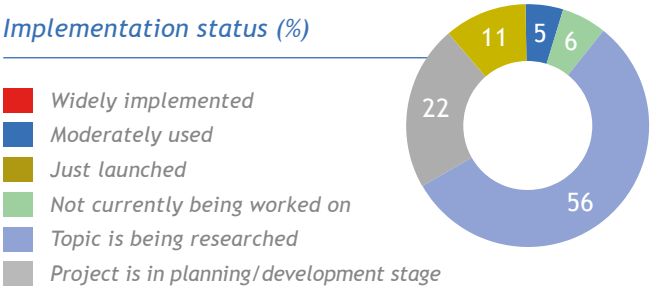
How the innovation advances financial inclusion: According to the analysis, many respondents still struggle to identify scalable CBDC use cases with significant impacts on financial inclusion, even though promoting financial inclusion remains a key policy objective for retail CBDCs, especially in emerging and lower-income countries. When properly designed to address access barriers, CBDCs could serve as a payment solution for financially excluded populations. Features that mirror the advantages of cash, such as access without a bank account, public trust in central bank-issued money, low or zero fees, and less stringent identity requirements for low-risk users, make CBDCs a promising tool in this context.

Impact on financial inclusion

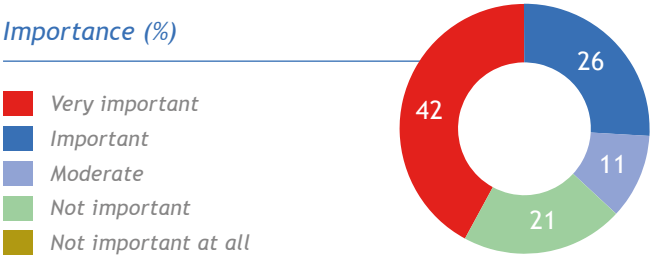


Innovation in practice: Financial regulators generally recognize the innovation's potential for financial inclusion. However, implementation remains in the early stages, with only five percent of respondents reporting moderate use while the majority are still in the exploratory stage.

Implementation status (%)



Importance (%)



Key policy enablers: AML/CFT compliance, data privacy regulations, technology standardization, IT infrastructure regulations, legal recognition of CBDCs, issuance and distribution regulations, interoperability for digital currencies, cybersecurity and data protection frameworks, consumer protection policies, cross-border payments regulations

Key market enablers: Peer-to-peer and cross-border payments, quantitative restrictions, regulator-private sector collaboration, robust technological infrastructure, public awareness and education, stakeholder engagement, widespread internet access for transaction settlement, high smartphone penetration, financial literacy, availability of multiple storage and transfer channels

Key driving forces: Market demand, monetary policy objectives, central banks, ministries of finance, governments

Selected Jurisdictions of Reference:
Bahamas, China, Ghana, Jamaica, Kenya, Nigeria

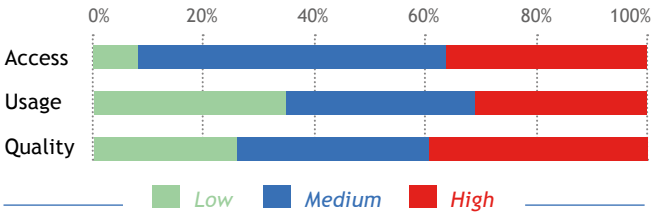
Relevant AFI knowledge products:
Central Bank Digital Currency – an opportunity for financial inclusion in developing and emerging economies?

CHATBOTS AND DIGITAL CUSTOMER SUPPORT

Chatbots and digital customer support are automated tools that help people access and use financial services more easily and quickly. These programmed or AI-powered systems interact with users via messaging interfaces on websites or mobile applications, providing support by answering questions, guiding users through financial processes, and offering personalized recommendations. This innovation enhances the user-friendliness of financial services, especially for individuals unfamiliar with traditional banking systems, and is closely related to another innovation featured in this report: Automation of Consumer Complaints.

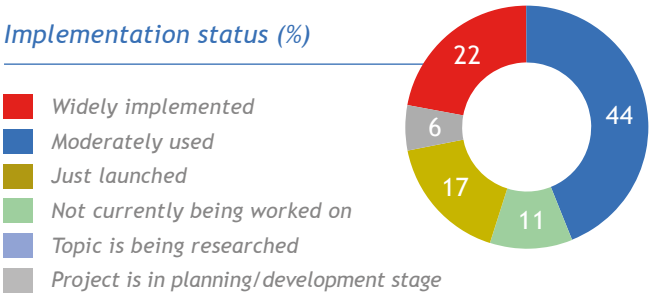
How the innovation advances financial inclusion: Regulators see the primary value of this innovation in expanding access to financial services. Available 24 hours a day, chatbots allow users to seek help whenever needed, regardless of location. By automating customer support, financial institutions can reduce their operating costs, which may result in lower fees for users. Chatbots also help users better understand financial products and practices while analyzing user data to recommend tailored options, improving financial literacy, confidence, and the relevance of financial options. Design ed with user-friendly language, chatbots are particularly helpful for those with limited financial knowledge and can also be developed with accessibility features, such as voice commands, text-to-speech, and intuitive navigation, to support users with disabilities, ensuring inclusive access to essential financial services and information.

Impact on financial inclusion

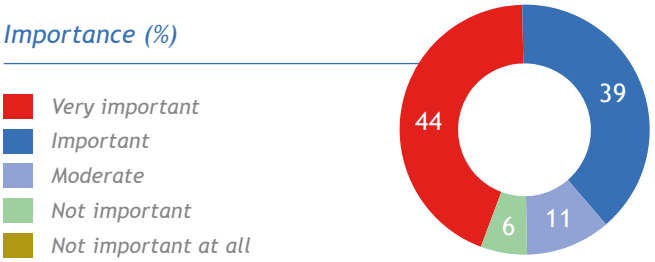


Innovation in practice: Regulators within the AFI network understand the importance of this innovation for advancing financial inclusion. This is reflected in its adoption, with two-thirds of respondents reporting that chatbots are either widely implemented or moderately used in their jurisdictions.

Implementation status (%)



Importance (%)



Key policy enablers: Consumer recourse policies, data protection and privacy regulations, standards ensuring fairness and transparency in financial products and services

Key market enablers: AI/ML service providers, cooperation between FinTech companies, cloud and high-performance technologies, internet penetration, smartphone penetration, natural language processing capabilities, data management infrastructure, consumer trust in digital interactions

Key driving forces: Financial institutions, technology firms, consumers, financial regulators

Selected Jurisdictions of Reference: Brazil, Cambodia, Fiji, Ghana, the Philippines, Rwanda, South Africa, United States

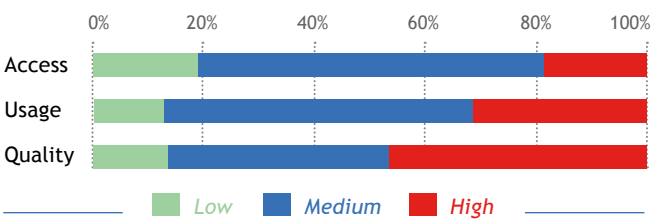
CLOUD-BASED DIGITAL FINANCIAL SERVICES AND SYSTEMS

Cloud-based services are software that run on a vendor's "cloud", meaning powerful computing and data centers in centralized geographic locations, and require a broadband internet connection between the client company and vendor's data center to function at all. Compared to custom-developed and locally deployed solutions, cloud-based services have a faster time-to-market and are easier to assemble, deploy, scale, update, and maintain. The major risk of cloud-based services comes from the fact that they rely on continuous internet connectivity and handle sensitive data, requiring regulatory attention to data security, service availability, and cross-border data sharing.


Shutterstock

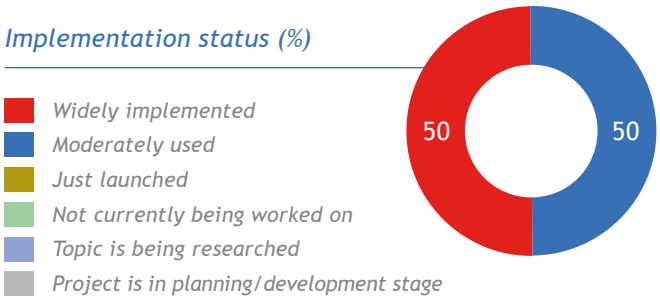
How the innovation advances financial inclusion: Regulators emphasize the impact of cloud-based solutions on the quality of financial services. Cloud-based digital services are much easier to build and scale, making them accessible to SMEs and creating business opportunities for vulnerable populations. Quality and usage both improve with cloud-based services, which can be updated directly on the server side to deliver new features more frequently and easily, while offering faster, more user-friendly access that often eliminates the need to install dedicated mobile apps.

Impact on financial inclusion

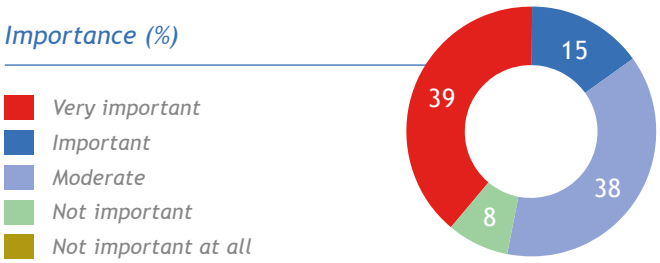


Innovation in practice: The majority of AFI respondents highlighted the importance of cloud-based solutions for financial inclusion. This innovation is already widely implemented across various jurisdictions represented by the respondents.

Implementation status (%)



Importance (%)



Key policy enablers: Data protection regulations, cloud-based services strategy and regulation, open finance and open data frameworks, cybersecurity regulations

Key market enablers: Stable broadband internet and connectivity infrastructure, reliable and scalable cloud infrastructure, cloud computing expertise

Key driving forces: Financial institutions, technology firms, governments, central banks, ministries of information technology

Selected Jurisdictions of Reference: China, European Union, Ghana, Japan, Singapore, United States

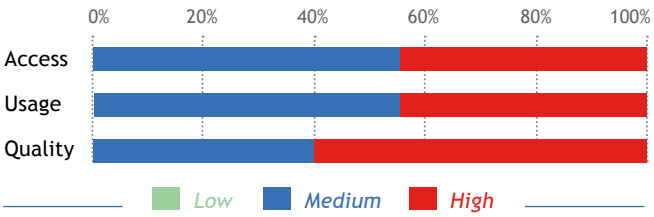
COMMUNITY INFORMATION CENTER

Community information centers (CICs) serve as agents of information, education, and development in rural communities. They set up ICT infrastructure at the block level to provide web access and internet services such as e-mail, market access, e-commerce facilities, and access to socioeconomic databases. Other services offered include e-learning (computer-aided learning), e-education, e-medicine, e-consulting, e-governance applications, G2C (government-to-citizen) services, and weather information. CICs promote IT awareness among local populations, conduct computer training programs, and disseminate tender notifications and e-employment opportunities.


Shutterstock

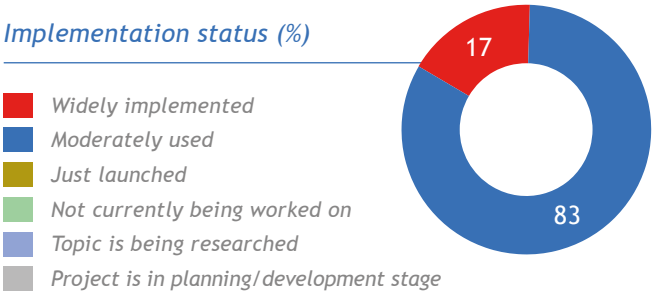
How the innovation advances financial inclusion: Regulators view CICs as an impactful innovation in the financial inclusion space, particularly in enhancing the quality of financial services. Established nationwide in rural areas, CICs deliver a wide range of services focused on the needs of rural residents, with significant benefits such as raising social awareness, reducing poverty, empowering women, enabling financial participation, and bridging the digital divide.

Impact on financial inclusion



Innovation in practice: The innovation has gained recognition and has been moderately implemented in various countries, with financial regulators largely considering it highly important for advancing financial inclusion in their respective jurisdictions.

Implementation status (%)



Importance (%)

Key policy enablers: CIC strategies, national ICT policies, and digital inclusion frameworks

Key market enablers: Internet penetration, widespread and accessible telecommunication services, qualified personnel, affordable and accessible internet connectivity, digital literacy

Key driving forces: Financial institutions, technology firms, central banks, ministries of finance, ministries of science and technology

Selected Jurisdictions of Reference: Bangladesh, Ghana, India

CROWDFUNDING

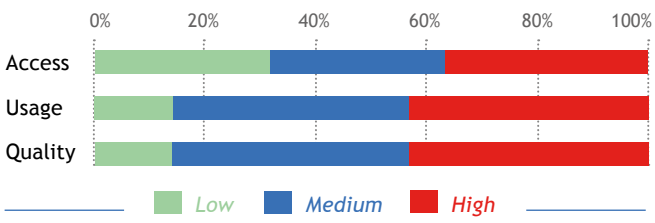
Crowdfunding is a financing method where small amounts of money are raised from large numbers of individuals or legal entities to fund businesses, specific projects, personal needs, or other goals. It bypasses traditional financial intermediaries by using online web-based platforms to connect fund seekers with retail funders. There are four main types:

- **Donations:** Contributors receive nothing in return. This is often used to fund charitable or social projects.
- **Equity (venture capital):** Investors contribute funds in exchange for a share of future profits or ownership.
- **Loans:** Contributors lend money with the expectation of interest; the borrower repays the loan with interest at the end of the term.
- **Rewards:** Donors receive a product, service, or a token of appreciation in exchange for their contribution.

How the innovation advances financial inclusion:

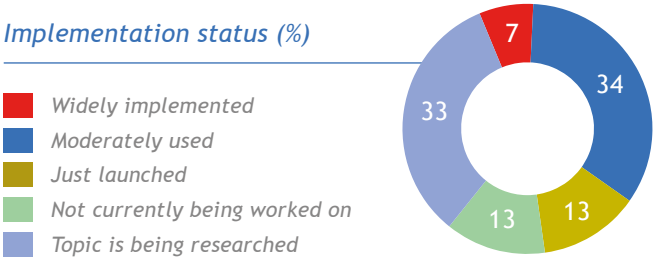
According to the survey, respondents believe that crowdfunding significantly supports financial inclusion, especially under the usage and quality pillars. Lending-based crowdfunding offers an effective way to mitigate financial exclusion, particularly in cases where traditional banking models may disadvantage low-income individuals, by giving undeserved groups and individuals quicker access to alternative financing. Crowdfunding is commonly used by startups and growing businesses to access non-traditional funding. Its flexibility allows investors and fundraisers to explore alternative income options. Debt-based crowdfunding, in particular, function as a form of digital credit, helping SMEs and startups build creditworthiness and gain access to formal loans from other financial institutions.

Impact on financial inclusion

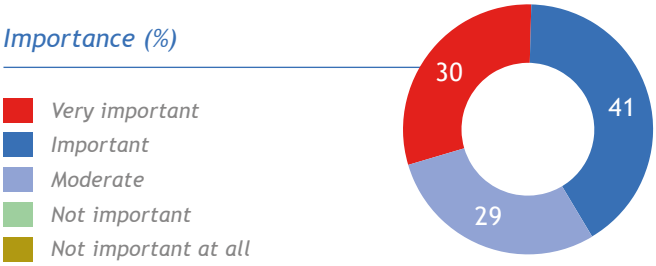


Innovation in practice: The majority of respondents consider crowdfunding a very important or important instrument for financial inclusion, with the innovation gaining recognition, being moderately implemented, and actively researched in various countries.

Implementation status (%)



Importance (%)



Key policy enablers: Regulations for crowdfunding, taxation policies and incentives for crowdfunding activities, investor and consumer protection

Key market enablers: Widespread internet access, robust telecommunications and smartphone availability, transparency and safeguards for crowdfunding platforms (including cryptocurrency models like initial coin offerings), digital infrastructure, and payment systems

Key driving forces: Market need for alternative funding mechanisms, startups, angel investors, international crowdfunding platforms, central banks, securities and exchange commissions

Selected Jurisdictions of Reference:
Canada, China, European Union, India, Kenya, Mexico, Singapore, South Korea, United States

Relevant AFI knowledge products:

Survey Report on Alternative Finance for MSMEs

Survey Report on FinTech for MSME Access to Financing (V.2)

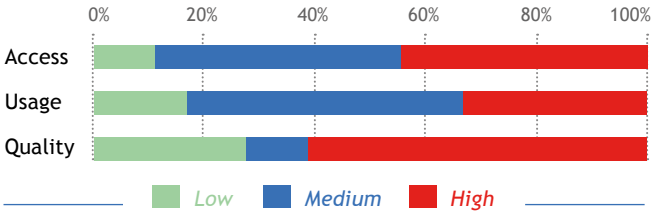
DATA MANAGEMENT INFRASTRUCTURE

Data management (governance) infrastructure refers to the hardware, software, and networking technologies used to support the storage, processing, and management of data within an ecosystem. This can include technologies such as databases, data warehouses, data lakes, data centers, cloud data platforms, and networking equipment. The purpose of data infrastructure is to provide the foundation for an open data policy by enabling the management, storage, processing, and analysis of data across the ecosystem. Without this infrastructure, data remains siloed and inaccessible.

How the innovation advances financial inclusion: Data management (governance) infrastructure ensures data accessibility and interoperability between institutions in the financial system, significantly improving customer convenience by enabling the seamless exchange of relevant data and eliminating the need for customers to repeatedly provide the same information. It further allows digital financial service providers to develop more customer-centric products and services using accessible data.

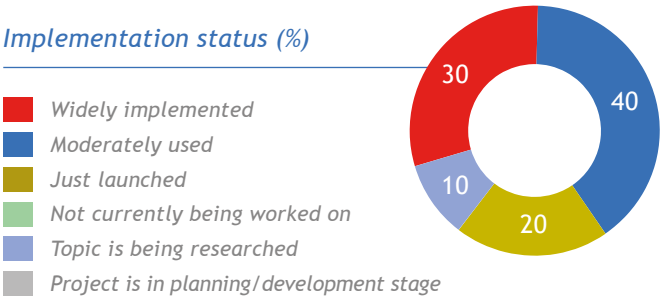
Access is enhanced as data interoperability enables customers to use more services without resubmitting personal data. Usage increases naturally, as reduced data friction leads to more frequent and seamless engagement. Quality also improves, as service providers can avoid storing redundant data, reducing the risk of duplicate or inaccurate records, while freeing up resources to focus on product improvement.

Impact on financial inclusion

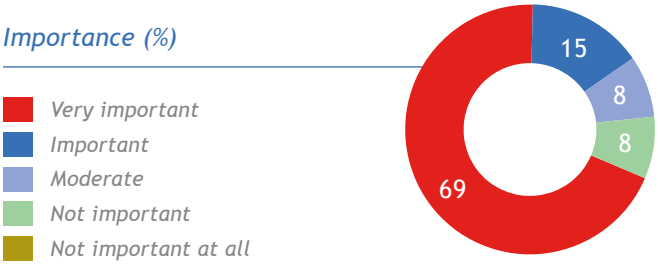


Innovation in practice: The majority of AFI respondents indicated that the innovation is widely to moderately used, with nearly 85 percent considering it very important or important, highlighting strong regulatory interest in its implementation as a key component of wider digital transformation.

Implementation status (%)



Importance (%)



Key policy enablers: Cybersecurity regulations, data management, analysis, and protection frameworks, interoperability standards, consumer data protection, national strategy for data management

Key market enablers: Broadband internet access, data management tool providers, software development talent and ecosystem, centralized and standardized financial data, availability of data centers, database technologies, secure data-sharing protocols

Key driving forces: Governments, ministries of IT, central banks

Selected Jurisdictions of Reference: Australia, Brazil, Estonia, Singapore, United Kingdom, United States

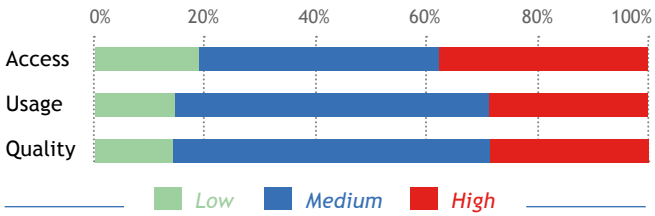
DATA MANAGEMENT TOOLS FOR AML/CFT

Data management tools for AML and CFT are technological solutions designed to help financial institutions detect, monitor, and report suspicious activities related to money laundering and terrorism financing. These tools use advanced data analytics, artificial intelligence, and machine learning algorithms to process large volumes of transaction data, assess risk profiles, and enhance compliance with regulatory requirements. By improving the efficiency of customer due diligence (CDD) and transaction monitoring processes, these innovations help institutions maintain compliance while expanding access to financial services for underserved populations.

How the innovation advances financial inclusion:

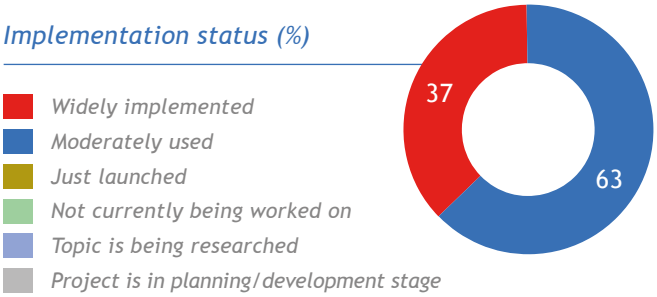
AFI respondents view the integration of data management tools for AML/CFT as having a medium impact on financial inclusion, in terms of both usage and quality. These tools enable financial institutions to assess and manage the risks of serving new clients, including those from underserved communities, thereby promoting access while mitigating the risk of financial crimes. Automating compliance processes reduces the administrative burden on financial institutions, freeing up resources to serve a broader customer base, including low-income individuals who may have previously been excluded. Robust AML/CFT systems also help build trust with regulators and the public, encouraging greater engagement with formal financial systems. At the same time, data analytics can support the design of targeted financial products that address the specific needs of underserved populations while ensuring compliance.

Impact on financial inclusion

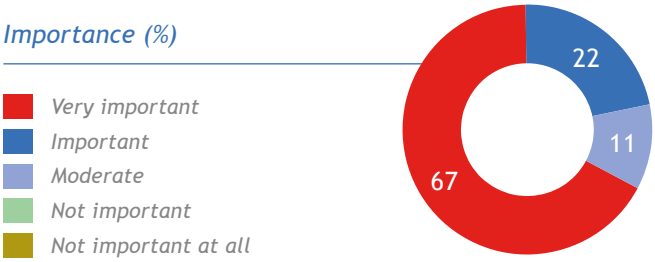


Innovation in practice: The innovation is implemented to varying degrees across the jurisdictions represented by respondents, with nearly 89 percent indicating it as very important or important for financial inclusion.

Implementation status (%)



Importance (%)



Key policy enablers: Comprehensive AML/CFT regulatory framework, data privacy and protection regulations, fraud prevention policies

Key market enablers: Access to digital infrastructure, availability of data, education and training, AI/ML analysis tools and expertise, strong compliance culture, data analysis and artificial intelligence, digital and mobile banking

Key driving forces: Financial institutions, FinTech companies, FATF, central banks, ministries of finance

Selected Jurisdictions of Reference:
European Union, Mexico, Nigeria, the Philippines, Singapore

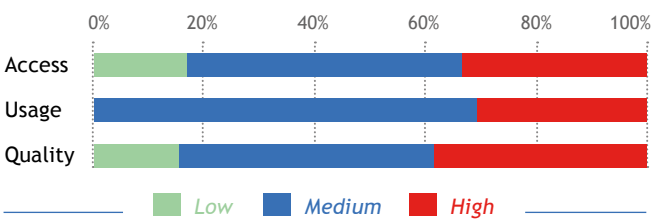
Relevant AFI knowledge products:
KYC Innovations, Financial Inclusion and Integrity in Selected AFI Member Countries

DECENTRALIZED FINANCE

Decentralized finance (DeFi) is an umbrella term commonly used to describe various services in crypto-asset markets that aim to replicate some functions of the traditional financial system while reducing reliance on intermediaries and decentralizing governance. DeFi builds on distributed ledger technologies (DLT) to offer services such as trading, lending, and investing without traditional centralized intermediaries, using financial protocols implemented as "smart contracts" that run on a network of private computers to automatically manage financial transactions. Built on top of DLT, it does not require banks or other traditional intermediaries. The underlying ecosystem can be competitive, as novel intermediaries such as miners or validators compete to process and settle transactions.

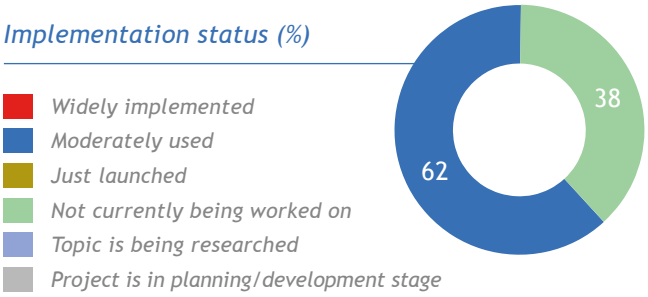
How the innovation advances financial inclusion: AFI respondents tend to view this innovation as having a medium impact on financial inclusion. While DeFi has the potential to improve access to finance for the unbanked, its novelty and inherent technological complexity may result in shortages of talent and expertise on the development side, as well as usability challenges for vulnerable populations compared to more familiar digital tools offered by established financial institutions.

Impact on financial inclusion

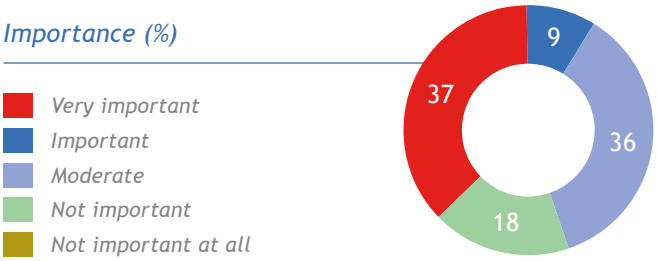


Innovation in practice: The innovation has received recognition and is moderately used in most jurisdictions represented by AFI respondents, who generally consider its importance for financial inclusion to be moderate or lower according to the survey.

Implementation status (%)



Importance (%)



Key policy enablers: Distributed ledger technology (DLT) regulations, data protection, AML/CFT regulatory obligations, consumer protection policies, special licensing regimes, central bank oversight, cybersecurity standards

Key market enablers: Smartphone penetration and reliable electricity networks, financial education, open source DLT platforms, technological awareness, oracles for integrating off-chain data into smart contracts, open API standards, blockchain networks, decentralized apps (DApps).

Key driving forces: Market interest in decentralized financial services, crypto and blockchain communities, central banks, ministries of finance, financial supervisory authorities

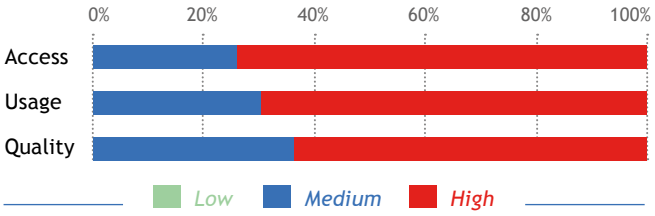
Selected Jurisdictions of Reference: Canada, China, France, Singapore, United Kingdom, United States

DIGITAL BANKING

Digital banking refers to the integration of digital technologies into traditional banking services, enabling customers to perform financial transactions through online and mobile platforms. This innovation includes services such as online banking, mobile apps, and digital wallets, allowing users to access and manage their finances remotely. By reducing the need for physical bank visits, digital banking offers a more efficient and accessible way for individuals to engage with financial services.

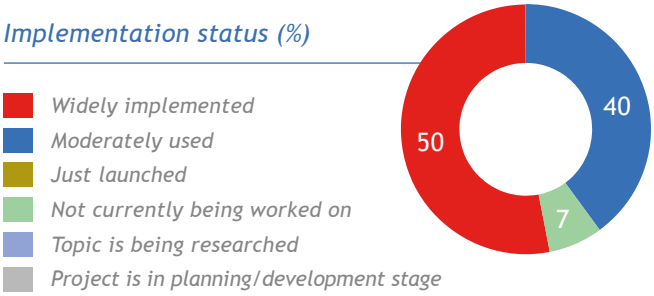
How the innovation advances financial inclusion: AFI members generally consider this innovation as having a high impact on financial inclusion, particularly in improving access. Digital banking helps individuals in remote and underserved areas overcome geographic barriers, while lower operational costs translate into more affordable banking options for low-income individuals. Online platforms simplify account opening, loan applications, and financial management, reducing complexity and friction. Digital banking also supports the development of tailored financial products and services, enhancing both usage and quality for underserved populations.

Impact on financial inclusion

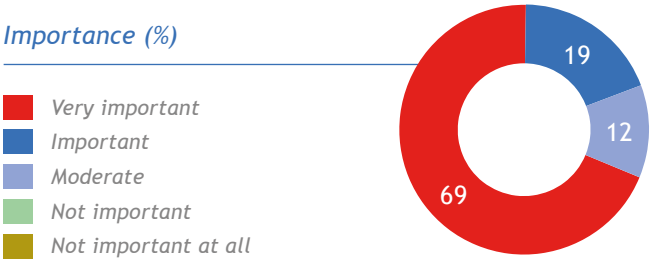


Innovation in practice: The majority of AFI respondents reported digital banking as being very important or important for financial inclusion. In an overwhelming number of countries represented, the innovation is already widely implemented or moderately used.

Implementation status (%)



Importance (%)



Key policy enablers: Interoperability and legal restrictions on collateral, a clear regulatory framework for digital banking (including risk management policies), consumer protection and financial inclusion regulations, cybersecurity regulations ensuring the security of digital banking platforms

Key market enablers: Secure and stable internet infrastructure, widespread smartphone use, a reliable electricity network

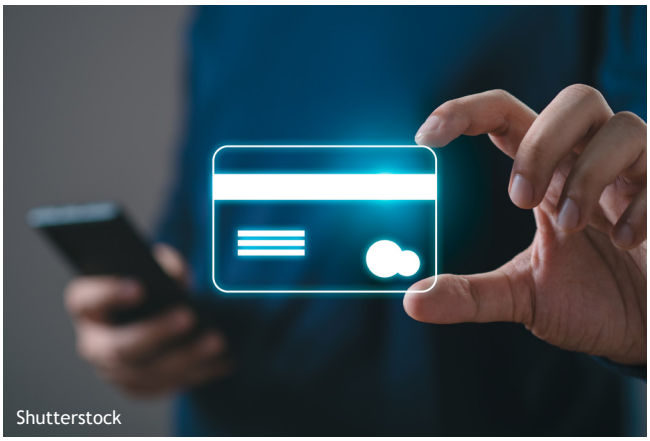
Key driving forces: Payment service providers, evolving consumer preferences, FinTech companies, central banks, ministries of finance, ministries of science and technology, telecommunications regulatory authorities

Selected Jurisdictions of Reference:
Brazil, Estonia, Kenya, Singapore, South Africa, South Korea, United Kingdom

Relevant AFI knowledge products:
Policy Framework on the Regulation, Licensing and Supervision of Digital Banks

DIGITAL CREDIT

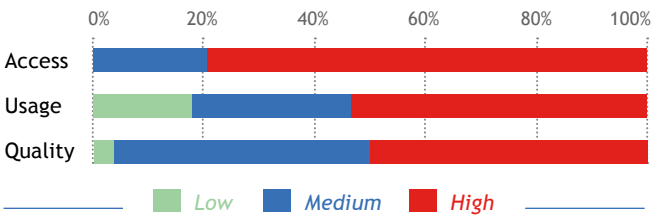
Digital credit is a loan delivered and repaid through digital channels. While it requires certain technological and regulatory advancements, it makes financial products more accessible and tailored to customers.


Shutterstock

How the innovation advances financial inclusion:

Offering credit through digital channels improves access to finance, especially for remote and underserved populations. Nearly 80 percent of AFI members consider digital credit to have a high impact on access to financial services, with over 50 percent also rating its impact on usage and quality as high. Access is most affected since digital availability naturally broadens reach to anyone with basic digital devices. Usage increases as reduced friction in credit applications leads more people to use digital credit, while quality improves as providers can offer more customer-centric products based on better data and analysis.

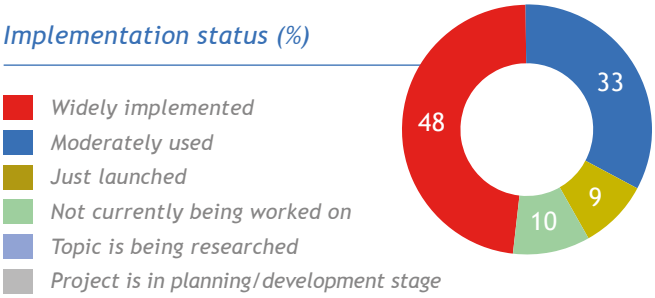
Impact on financial inclusion



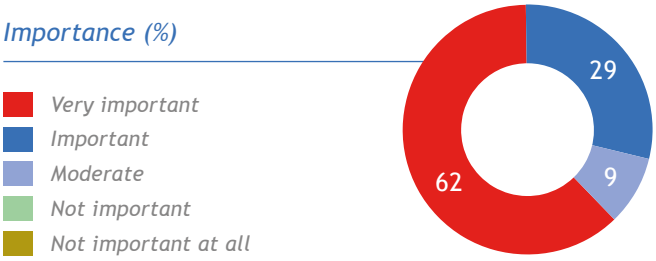
Innovation in practice:

Digital credit is one of the leading financial innovations, widely deployed and used, as it streamlines a core service offered by financial institutions. In over 80 percent of AFI respondent jurisdictions, digital credit is already widely or moderately implemented, and in more than 90 percent, it is considered important or very important for advancing financial inclusion.

Implementation status (%)



Importance (%)



Key policy enablers:

Operational risk management, digital ID and electronic KYC regulations, regulatory frameworks for digital credit providers, policies for small loans, data privacy, security and consumer protection regulations, transparent pricing, anti-predatory lending laws, interoperability

Key market enablers:

Smartphone penetration, credit scoring systems, feasibility for micro borrowers, security and fraud prevention practices, software development talent and ecosystem, affordable pricing for DFS

Key driving forces:

Banking and financial institutions, central banks, ministries of finance, ministries of science and technology

Selected Jurisdictions of Reference:

Brazil, Cambodia, China, India, Kenya, Nigeria, Samoa, South Africa, South Korea, United Kingdom, United States

Relevant AFI knowledge products:

Digital Credit Regulation in Tanzania

Scoping and Assessment Report on Responsible Digital Credit in Africa

Policy Framework for Responsible Digital Credit

Guideline Note 17: Digitally Delivered Credit

DIGITAL ID

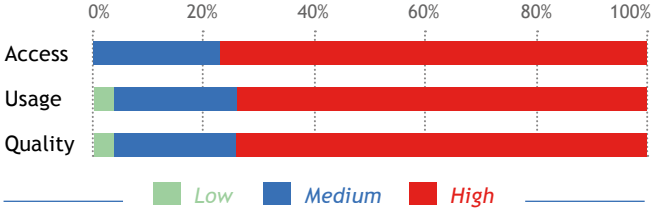
Digital IDs are electronic methods used to securely verify a person's identity. They use advanced technologies such as cryptographic keys or biometric data, including fingerprints and facial recognition, to confirm that the individual accessing a service is legitimate. Trusted entities such as governments and financial institutions issue these digital IDs. These systems enhance security, efficiency, and accessibility by facilitating access to government services, banking, healthcare, and online transactions in both the public and private sectors.


Shutterstock

How the innovation advances financial inclusion:

AFI members consider Digital ID to have a mostly high impact on financial inclusion, particularly in improving access to financial services. Digital ID makes it easier for unbanked individuals to open transaction accounts by simplifying documentation requirements, while also enabling more cost-effective onboarding processes that can be conducted remotely.

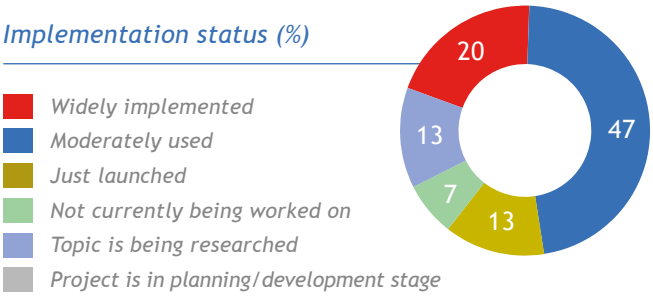
Impact on financial inclusion



Innovation in practice:

This innovation is considered very important by the majority of AFI respondents, with around two-thirds reporting it is widely or moderately implemented in their countries.

Implementation status (%)



Importance (%)

Key policy enablers:

Comprehensive legal and regulatory frameworks for digital identity, data security and protection, KYC requirements, interoperability, digital signatures, identity service provider frameworks, national identification systems

Key market enablers:

Smartphone penetration and reliable electricity networks, robust technology infrastructure, integrated national identification systems, data infrastructure

Key driving forces:

Government e-governance policies, tech companies, central banks, ministries of finance, ministries of IT, national identification authorities, governments

Selected Jurisdictions of Reference:

Australia, Belgium, Canada, Estonia, Finland, India, Kazakhstan, the Netherlands, Norway, the Philippines, Singapore, Sweden

Relevant AFI knowledge products:

Leveraging Digital ID and E-KYC to Deliver Social Protection Programs and Advance Financial Inclusion During the COVID-19 Pandemic and Future Crises

Leveraging Digital ID and e-KYC for the Financial Inclusion of Forcibly Displaced Persons: Risks and Opportunities

Regional Framework on E-KYC and Electronic Identity for ECAPI

Policy Model for Digital Identity and Electronic Know Your Customer (e-KYC)

DIGITAL INVESTMENT PLATFORM

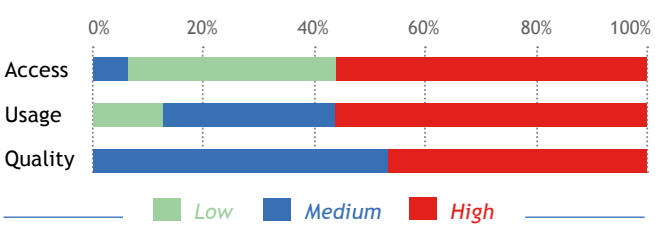
Digital investment platforms are online services that enable individuals to invest in various financial assets, such as stocks, bonds, mutual funds, and cryptocurrencies, by leveraging technology to provide user-friendly interfaces, often through mobile applications. By lowering barriers to entry, they allow users to start investing with minimal capital, making investment opportunities accessible to a wider audience.


Shutterstock

How the innovation advances financial inclusion:

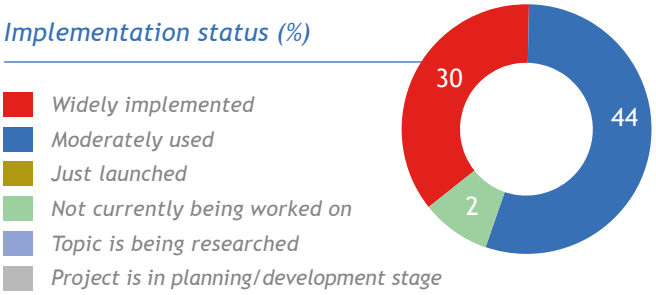
AFI respondents consider this innovation to have a high impact on financial inclusion, especially in terms of access and usage of financial services. Digital investment platforms democratize investing by enabling individuals with limited financial resources to start with small amounts. Many platforms also offer educational tools to help users understand investment concepts, enhancing financial literacy among underserved populations. By offering lower fees than traditional financial institutions, these platforms offer a more affordable entry into investing while giving users access to a broad range of investment products that support portfolio diversification and effective risk management. The ability to manage portfolios from mobile devices increases user engagement, especially among younger demographics.

Impact on financial inclusion

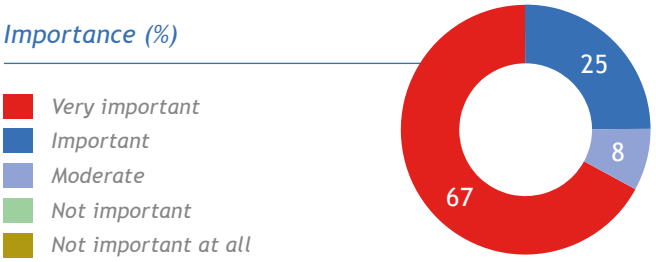


Innovation in practice: AFI respondents highlight the importance of digital investment platforms for financial inclusion, which explains their wide implementation and usage across the jurisdictions represented.

Implementation status (%)



Importance (%)



Key policy enablers: Financial literacy initiatives, regulatory framework for digital investment platforms, investor protection, ensuring fraud prevention measures, e-KYC and digital investor protection tools

Key market enablers: Secure digital infrastructure, stable and reliable internet network, software development talent and ecosystems, investors and venture capitalists, digital and mobile banking, digital financial literacy and education, digital ID systems and secure verification protocols

Key driving forces: Central banks, securities and exchange commissions, telecommunications regulatory bodies

Selected Jurisdictions of Reference:

Cambodia, China, European Union, India, South Africa, United States

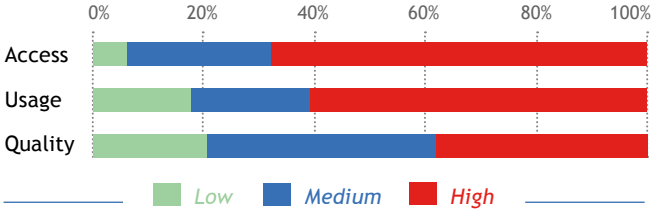
DIGITAL PLATFORMS FOR CONSUMER EDUCATION AND FINANCIAL LITERACY

Digital platforms provide access to financial education by making learning more convenient and engaging. These platforms provide up-to-date information, cater to varying levels of financial literacy, and offer a personalized learning experience, ensuring individuals can find resources tailored to their specific needs.

How the innovation advances financial inclusion: AFI respondents consider this innovation as having more of an impact on access to financial services, followed by usage and quality. Access is improved as a better informed public becomes more aware of the financial products and services available to them. Usage increases for similar reasons, as increased knowledge leads to higher consumer confidence and more use. The key benefits of digital financial education platforms include wider accessibility (overcoming geographical barriers), personalized learning, interactive tools, real-time updates, continuous learning, cost-effectiveness, and broader reach for policymakers.

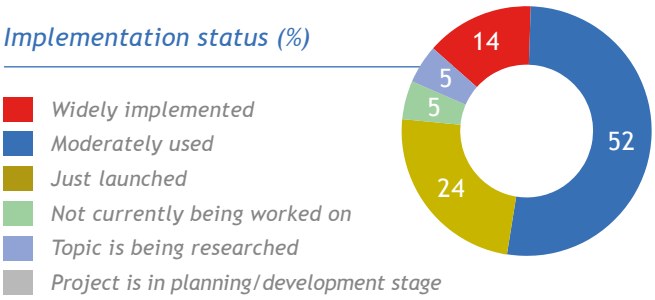
These platforms also play a vital role in promoting financial inclusion by offering informational access to those previously excluded from traditional financial education systems, empowering them to make more informed financial decisions and apply for financial services.

Impact on financial inclusion



Innovation in practice: The majority of AFI respondents consider this innovation as very important or important for financial inclusion, with two-thirds reporting it to be widely or moderately implemented in their countries.

Implementation status (%)



Importance (%)

Key policy enablers: Financial inclusion strategies, financial literacy initiatives, financial education strategies

Key market enablers: Educational content providers and expertise, high internet and smartphone penetration, potential for mobile apps and SMS-based services to deliver accessible financial education, interactive web platforms and mobile apps, data analytics tools, social media platforms

Key driving forces: Central banks, financial institutions, donor agencies, ministries of finance, ministries of education

Selected Jurisdictions of Reference: Armenia, Australia, Brazil, Fiji, India, New Zealand, Singapore, United Kingdom, United States

Relevant AFI knowledge products:

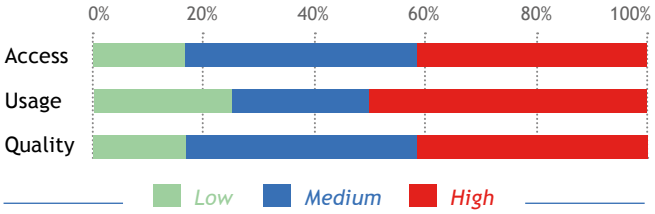
Repository of Virtual Tools for Financial Literacy
Policy Note on Digital Financial Literacy for ASEAN
Digital Financial Literacy Toolkit
Digital Financial Literacy

DIGITAL PLATFORM FOR MOVABLE ASSET-BASED LENDING

Digital platforms for movable-asset-based lending leverage technology to provide loans using movable assets such as vehicles, equipment, or inventory as collateral. These platforms streamline the borrowing process, enabling individuals and small businesses, particularly those that may not qualify through traditional banks, to access credit. By automating asset evaluation and risk assessment, these platforms ensure faster loan approvals and disbursements, enhancing credit accessibility.

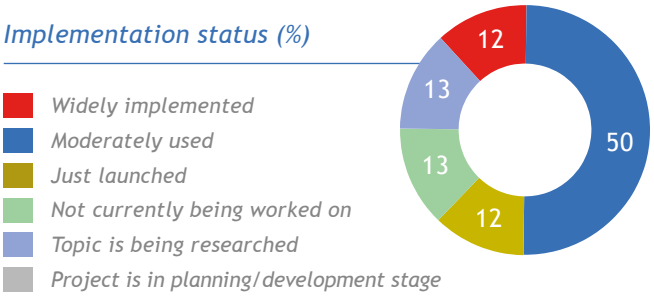
How the innovation advances financial inclusion: AFI respondents consider this innovation to have a mostly moderate impact on financial inclusion, particularly in terms of access and quality of services. These platforms expand credit opportunities for individuals and small businesses with limited credit histories by accepting movable assets as collateral. However, the requirement to possess such collateral may limit participation from some borrowers. Still, this digitalization reduces barriers by allowing faster assessments, quick approvals, and shorter wait times, which leads to quicker access to funds and increased usage of financial services.

Impact on financial inclusion



Innovation in practice: While the majority of respondents highlighted the importance of this innovation, it is still in the expansion stage, with only 12 percent reporting wide implementation of such platforms in their jurisdictions.

Implementation status (%)



Importance (%)

Key policy enablers: Online collateral registry, legal framework for using movable assets as collateral in lending, policies regulating digital platforms including consumer protection and data privacy, secured transactions framework

Key market enablers: Financial products and services based on movable asset collateral (e.g. supply-chain finance, factoring, invoice financing, and others)

Key driving forces: Financial institutions, central banks, ministries of finance

Selected Jurisdictions of Reference: China, Ghana, Kenya, Liberia, South Africa, Tunisia, Turkey, United States

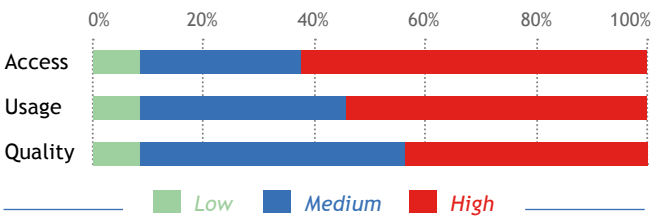
DIGITAL SAVING

Digital saving refers to savings services that are entirely digital, conducted over the internet and accessible via devices. Digital savings accounts differ from conventional ones in aspects such as existence, interest rates and costs, customer data security, flexibility, customer autonomy, feature completeness, and the use of artificial intelligence.


Shutterstock

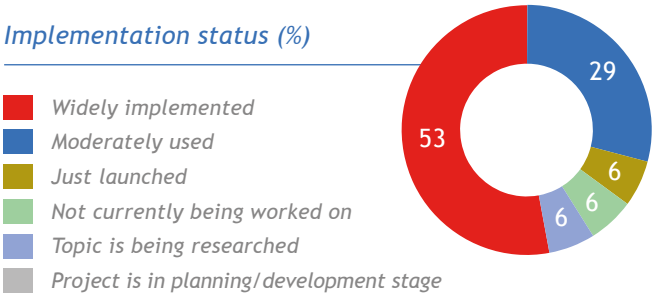
How the innovation advances financial inclusion: AFI respondents consider digital savings to have a high impact on access to financial services, followed by significant impacts on usage and quality. Digital saving helps overcome barriers to financial access caused by physical distance, high costs, and lack of infrastructure. By leveraging digital technologies, it promotes financial inclusion by reaching underserved markets and driving innovation in the financial sector. Digital saving also offers convenient access to faster, more affordable, and customized products for underserved populations, with a strong potential to meet women's financial needs where informal and traditional financial services have fallen short.

Impact on financial inclusion

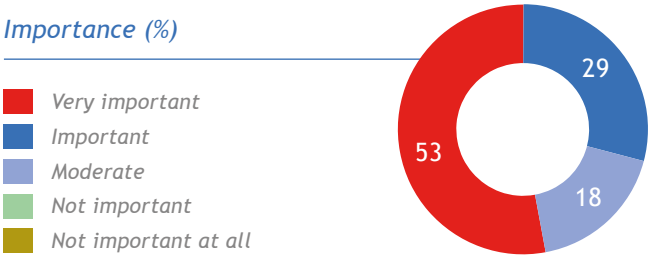


Innovation in practice: AFI respondents highlight the high importance of this innovation for financial inclusion, noting that it is widely implemented or moderately used in the majority of member jurisdictions represented in the survey.

Implementation status (%)



Importance (%)



Key policy enablers: Clear regulatory framework for digital savings platforms, customer fund protection, KYC regulations, interoperability

Key market enablers: Smartphone penetration, internet access, customer demand, secure and scalable digital infrastructure, integration with mobile money services, promotion of digital savings for low-income populations, digital and mobile banking

Key driving forces: Financial institutions, central banks

Selected Jurisdictions of Reference: Brazil, Cambodia, Kenya, Samoa, South Africa, South Korea, United Kingdom, United States

DIGITAL TRANSFORMATION

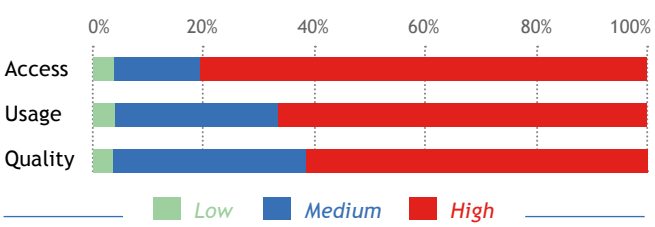
Digital transformation is the shift toward a "digital-first" operational model, moving away from traditional systems centered on physical infrastructure (e.g. buildings and equipment). It occurs within both organizations and across entire ecosystems, encompassing:

- **Consumer centricity:** prioritizing user needs and experience at every stage, shifting from product-focused models to customer-driven design.
- **Cybersecurity and data protection:** addressing emerging risks with new technologies, with strong regulatory and technical safeguards to protect systems and consumer information.
- **Delivery channels:** using digital channels (web, mobile, wireless) to provide financial services with an emphasis on equal access across all channels (omnichannel delivery).
- **Infrastructure:** upgrading core systems, expanding internet access, and improving tools for task management, document flow, identity, access, and data storage.
- **Management and culture:** adopting agile, adaptive practices to improve efficiency and better align with the digital economy.
- **Open data and communication:** sharing financial institution data and functionality through APIs and digital platforms to enable innovation and new products and services.

How the innovation advances financial inclusion:

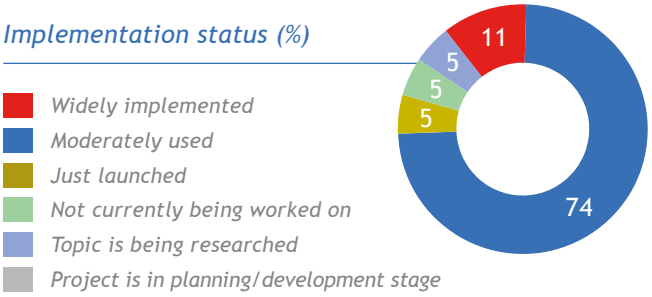
As digital transformation drives the financial industry toward greater customer centricity, it becomes easier to address and develop tailored financial products that meet the needs of vulnerable consumers. AFI respondents reported a strong and positive impact of this innovation across all pillars of financial inclusion. Among AFI members, 80 percent indicated that it has a high impact on access to financial services, while more than 60 percent noted a high impact on usage and quality. Digital transformation improves access by enabling digital delivery channels such as web, mobile, and GPRS, increases usage by making services faster and more convenient, and improves quality by allowing easier design, scaling, and analysis of financial products compared to traditional non-digital services.

Impact on financial inclusion

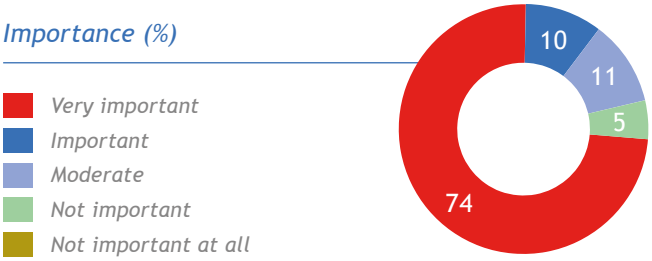


Innovation in practice: This innovation is a global, ongoing process across institutions of all sizes. Most AFI respondents underline its importance for financial inclusion, but only 11 percent report wide implementation, while around 74 percent indicate moderate usage, showing it is in the early adoption stages.

Implementation status (%)



Importance (%)



Key policy enablers: Digital transformation strategy, comprehensive digital economy and ICT policy framework, data protection and cybersecurity regulations, open data policies, supportive tax policies, privacy laws, open API standards for open finance

Key market enablers: Software development providers, broadband affordability, human capital, robust digital infrastructure

Key driving forces: Financial institutions, consumers, ministries of IT, central banks, telecommunications regulatory authorities

Selected Jurisdictions of Reference:
Bangladesh, European Union, United Arab Emirates, United States

Relevant AFI knowledge products:

FinTech for Financial Inclusion: A Framework for Digital Financial Transformation

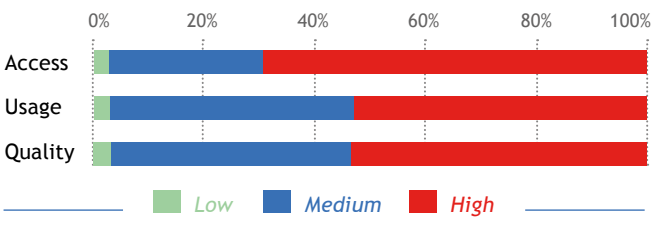
Digital Transformation of Microfinance & Digitization of Microfinance Services to Deepen Financial Inclusion in Africa

E-KYC (due diligence for financial institutions)

Electronic Know Your Customer (e-KYC), a digital process used by financial institutions to verify client identities electronically, involves collecting and analyzing customer data through advanced technologies such as biometric verification, document scanning, and access to government databases. e-KYC streamlines identification, making it faster, more efficient, and less prone to fraud than traditional methods.

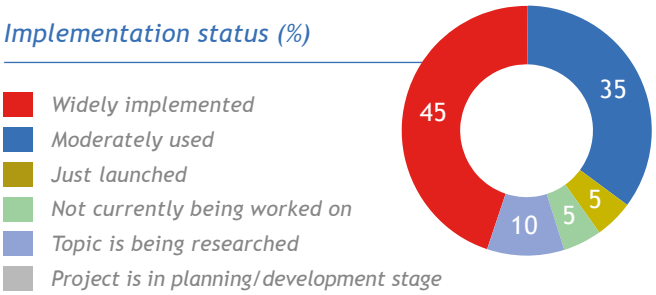
How the innovation advances financial inclusion: AFI respondents view e-KYC as having a high impact on access to financial services, though its effect on usage and quality is less pronounced. By enabling easier access for individuals in remote or underserved areas, e-KYC helps overcome the scarcity of physical bank branches and reduces operational costs for institutions, allowing more affordable services. Automation speeds up account openings and service delivery, benefiting low-income customers needing immediate access to financial resources. By using secure digital methods, e-KYC builds customer trust and encourages greater engagement with formal financial services.

Impact on financial inclusion



Innovation in practice: The majority of AFI respondents highlight the importance of e-KYC for financial inclusion. Almost half report wide implemented in their jurisdictions, while 35 percent indicate moderate usage.

Implementation status (%)



Importance (%)

Key policy enablers: Anti-fraud regulations, data privacy and protection regulations, digital identity and verification standards, legal framework for electronic customer identification

Key market enablers: Verifiable electronic signatures, technologies for reliable remote enrollment, stable and reliable internet network, data infrastructure for secure e-KYC, digital and mobile banking, digital ID systems and secure verification protocols

Key driving forces: Governments, financial institutions, central banks, ministries of science and technology

Selected Jurisdictions of Reference: Cambodia, India, Malaysia, the Philippines, Singapore

Relevant AFI knowledge products:

Leveraging Digital ID and E-KYC to Deliver Social Protection Programs and Advance Financial Inclusion During the COVID-19 Pandemic and Future Crises

Leveraging Digital ID and e-KYC for the Financial Inclusion of Forcibly Displaced Persons: Risks and Opportunities

Policy Model for Digital Identity and Electronic Know Your Customer (e-KYC)

Regional Framework on E-KYC and Electronic Identity for ECAPI

E-MONEY AND DIGITAL WALLET

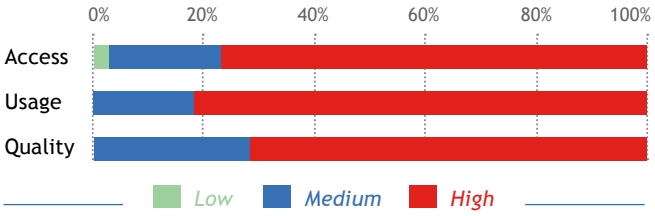
E-money is an electronic prefunded payment instrument backed by real balances in a country's official currency and widely used for payments beyond the e-money issuer. It is accessible through digital wallets, online money, mobile money wallets, or card-based instruments provided by licensed banks, mobile network operators, non-banks, or mixed banks. A digital wallet is an app on an electronic device that securely stores payment information, allowing users to make purchases without physical cash or cards.

How the innovation advances financial inclusion:

AFI respondents overwhelmingly see e-money and digital wallets as having a high impact on financial inclusion. This innovation simplifies payments by offering convenience and speed, eliminating the need for traditional physical payment methods. Users can manage funds and make transactions anytime and anywhere, often instantly or within minutes, unlike traditional banking methods which can take days. Digital wallets also provide robust security features, including advanced encryption and biometric authentication to safeguard user data and transactions.

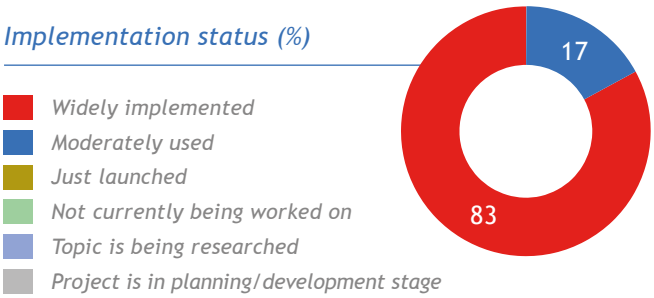
Another significant benefit is their ability to integrate with various financial services, such as budgeting tools and investment platforms, encouraging more cohesive money management. Digital wallets also offer cost-effectiveness with lower fees and reduced reliance on cash. Their global reach supports international transactions, multiple currencies, and various payment methods, adding flexibility for users.

Impact on financial inclusion



Innovation in practice: AFI respondents almost unanimously agree on the high importance of e-Money and digital wallets for financial inclusion. All reported that these innovations are either widely implemented or moderately used in their jurisdictions.

Implementation status (%)



Importance (%)

Key policy enablers: Regulatory framework for e-money issuers, e-money agents, interoperability, consumer protection and financial literacy regulations, e-KYC and digital ID regulations.

Key market enablers: Mobile phone penetration, internet access, smartphone penetration (for digital wallets), software development talent and ecosystems, automated clearing house infrastructure

Key driving forces: Central banks, FinTech companies, financial institutions, mobile network operators

Selected Jurisdictions of Reference:
Bangladesh, Brazil, Cambodia, China, Fiji, India, Kenya, Singapore, Tajikistan, Thailand, United States

Relevant AFI knowledge products:

Policy Model for E-Money

E-money in El Salvador: A comprehensive model

Trust Law Protections for E-Money Customers

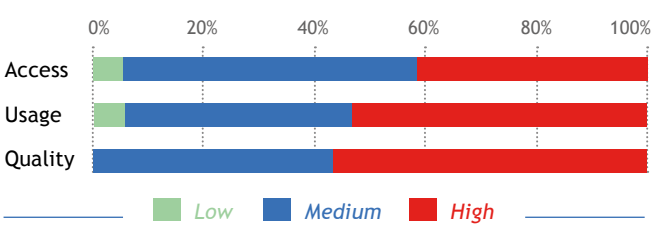
FINANCIAL AGGREGATORS

A financial aggregator, or financial account aggregator, consolidates financial data from multiple sources, allowing users to view all of their financial information in one place, often through a single interface. It enables consumers to connect and view their checking accounts, savings accounts, investment portfolios, credit cards, mortgages, transaction history, and more, offering a comprehensive picture of their finances. These providers may also deliver useful insights based on aggregated data or allow users to share structured data with third party analysis services.


Shutterstock

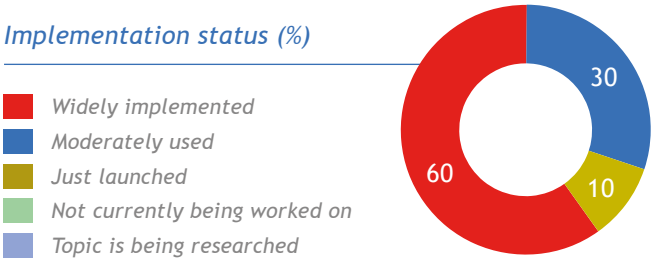
How the innovation advances financial inclusion: By giving consumers a unified view of their financial activity and potentially offering personalized insights, financial aggregators can improve money management and help prevent missed payments or disorganized finances. Among AFI member respondents, 40 percent consider financial aggregators to have a high impact on access to financial services, with over 50 percent seeing a high impact on usage and quality. Access is moderately affected, as aggregators primarily serve already financially -included consumers. However, usage tends to rise as better aggregation brings convenience, attracts audience, and, eventually, encourages engagement. Quality may also improves as aggregated data facilitates an easy comparison of products, promoting competition and service improvements.

Impact on financial inclusion

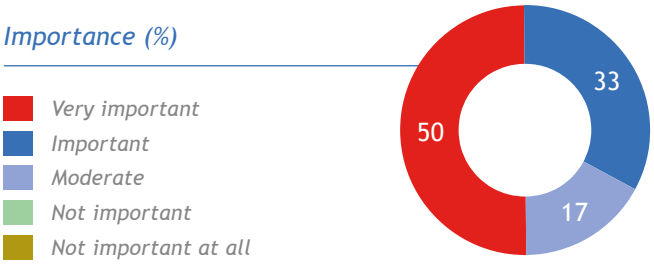


Innovation in practice: Among AFI member respondents, 60 percent report the innovation as widely implemented, 30 percent as moderately used, while 33 percent consider it important, and 50 percent very important.

Implementation status (%)



Importance (%)



Key policy enablers: Data privacy and consumer protection regulations, data sharing frameworks, open finance regulations, interoperability

Key market enablers: Digital infrastructure, internet access, digital and mobile banking, open banking and API ecosystems, instant payments, secure data transfer and storage mechanisms

Key driving forces: Banking and financial institutions, consumers, payment service providers, central banks

Selected Jurisdictions of Reference:
Brazil, European Union, Ghana, India, United States

FINANCIAL INNOVATION LABORATORY

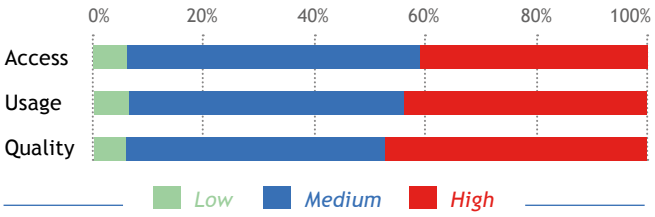
Financial Innovation Laboratory (FIL) is a regulatory innovation that hosts challenges to identify and support solutions promoting inclusive and connected digital economies. Innovation labs serve as dynamic ecosystems where diverse stakeholders such as startups, established financial institutions, venture capitalists, and technology experts collaborate. This cross-pollination of ideas transcends organizational boundaries, promoting a spirit of openness and knowledge sharing. A FIL typically focuses on three main pillars:

- ✓ Sharing and advancing knowledge and best practices
- ✓ Facilitating structured policy dialogues
- ✓ Supporting the incubation of specific financial innovations

How the innovation advances financial inclusion:

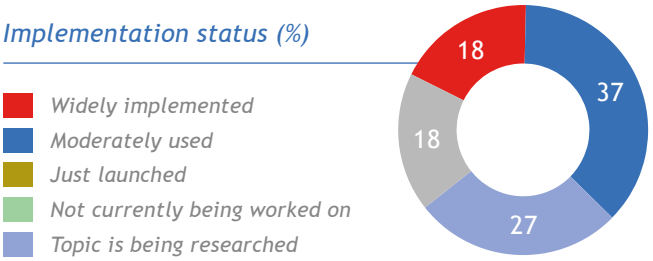
AFI respondents largely consider the FIL as having a moderate impact on financial inclusion. The Lab encourages multisectoral dialogue, promoting debate and the exchange of experiences among market stakeholders, including both public sector and private sector actors in the development of innovative financial instruments. However, the actual implementation and measurable impact of these instruments remains unclear. As a result, while the FIL is a valuable tool for developing regulatory and market-based solutions, its actual impact on financial inclusion is generally viewed as moderate.

Impact on financial inclusion

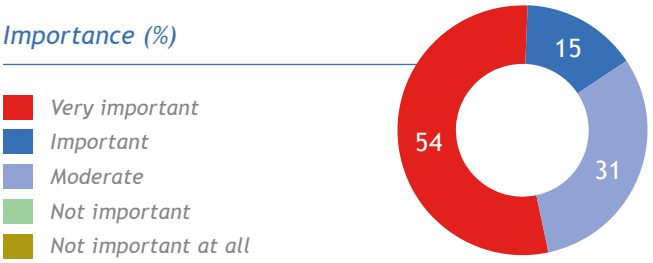


Innovation in practice: AFI respondents highlight the importance of this innovation for financial inclusion. However, given the moderately expected impact of the FIL, it is mostly implemented at a moderate level.

Implementation status (%)



Importance (%)



Key policy enablers: Financial innovation legal and regulatory frameworks, MOUs with regulatory agencies and FinTech players

Key market enablers: Strong outreach plans, regional availability, grant programs and partnerships, entrepreneurial culture and education, innovation ecosystems, access to mentoring and seed funding, support for FinTech innovation, experimental platforms for testing innovations

Key driving forces: Markets, innovative ecosystems, venture capitalists, ministries of finance, ministries of investment, central banks

Selected Jurisdictions of Reference:
Brazil, Canada, European Union, Hong Kong, Japan, Singapore, South Korea, Switzerland, United Kingdom, United States

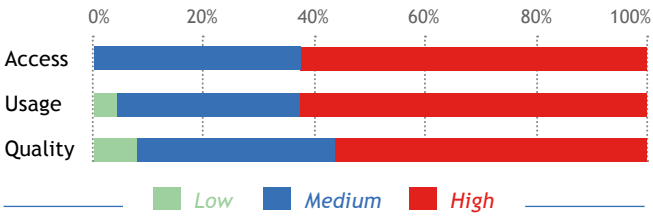
GOVERNMENT FOR PEOPLE DFS

Government-to-people digital financial services (G2P DFS) refers specifically to the digitization of financial transactions between governments and individuals, encompassing government payouts, pensions, enforcement payments, taxes, permits, intellectual property fees, police fines, notary and judicial payments, and more. Forward-looking governments aim to provide convenient digital access to these services through official portals and in partnership with commercial DFS providers.

How the innovation advances financial inclusion:

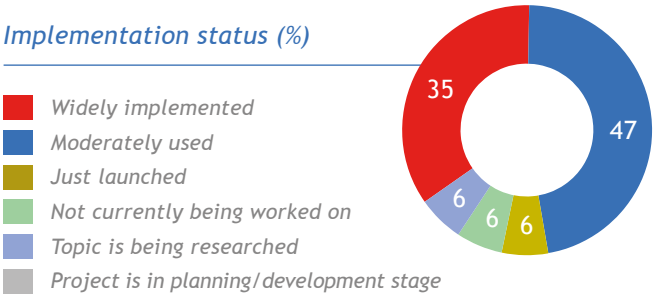
AFI respondents largely consider this innovation as having a high impact on financial inclusion given that G2P DFS improves access to financial services for underserved populations, particularly in remote or rural areas. These platforms allow individuals without traditional banking access to receive payments, save money, and make transactions via mobile or online channels. Digital delivery helps reduce operational costs, enabling lower fees, and minimum balance requirements that make services more affordable for low-income users, while many platforms often include financial education tools that help users make informed decisions. By expanding access to savings and investment options, G2P DFS promotes financial stability and inclusion, enhances transparency, improves government assistance delivery, and enables better financial planning and security for those previously excluded from formal systems.

Impact on financial inclusion

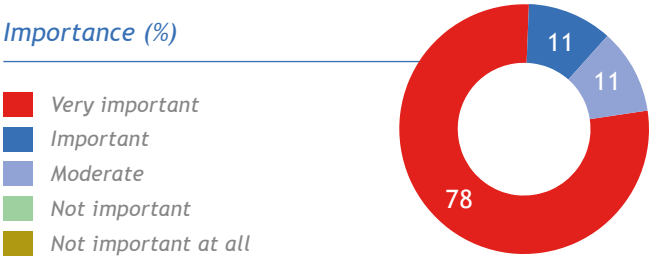


Innovation in practice: AFI respondents largely highlight the high importance of G2P DFS for financial inclusion, although in many jurisdictions, the innovation is only moderately used, indicating it is still expanding across the network.

Implementation status (%)



Importance (%)



Key policy enablers: Incentives for providers, interoperability, regulations for the national payment system to enhance access to financial services, policies promoting inclusive finance and DFS, consumer protection and financial literacy regulations, government adoption of digital payments

Key market enablers: Technological infrastructure, collaborating with FinTech companies and traditional financial institutions, user-centric designs, internet access, financial literacy, smartphone penetration and reliable electricity networks, public-private partnerships, digital government tools and infrastructure, market-led innovations by mobile and telecom companies, digital payment systems, interoperable electronic funds transfers, e-money

Key driving forces: Governments, payment service providers, central banks, ministries of finance

Selected Jurisdictions of Reference:

Bangladesh, European Union, Fiji, Ghana, India, Nigeria, Seychelles

Relevant AFI knowledge products:

Transforming Economics of Payments (Chile)

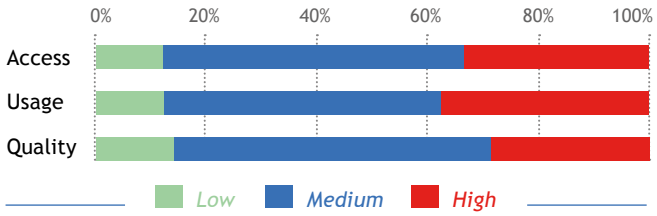
Policy Framework for Leveraging Digital Financial Services to Respond to Global Emergencies - Case of COVID-19

GREEN FINANCE

Green finance refers to financial services and products designed to help businesses and individuals build resilience and adapt to climate change by supporting climate-smart investments and income-generating opportunities. These products contribute to managing climate risks and promoting the transition to green economies.

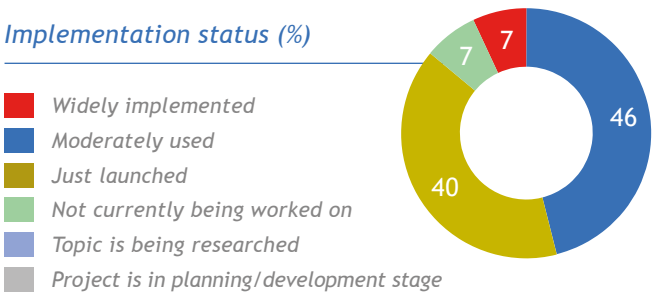
How the innovation advances financial inclusion: Most AFI respondents view green finance as having a moderate impact on financial inclusion. This is partly because green finance is often associated with large-scale projects and investments (e.g. building a powerplant or redesigning a manufacturing line) which are typically inaccessible to underbanked or underserved groups. However, benefits to the broader economy include increased resilience in agriculture and food production, and greater opportunities for MSMEs to participate in green sectors and climate-resilient income streams.

Impact on financial inclusion

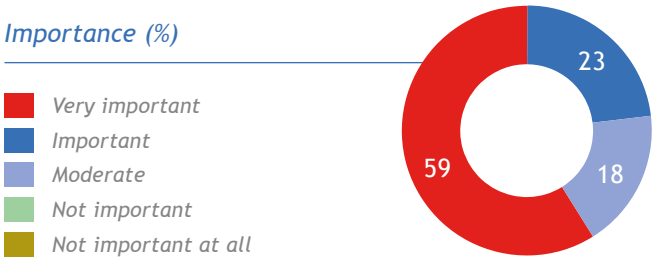


Innovation in practice: AFI respondents highlight the importance of green finance for financial inclusion, but due to its traditionally limited impact, the implementation of such products remains low.

Implementation status (%)



Importance (%)



Key policy enablers: Robust environment for green finance, tax incentives for sustainable investments, green finance strategies, regulatory frameworks for green bonds, clear ESG standards and reporting frameworks, green taxonomies, carbon credit systems

Key market enablers: International organizations, sustainability consultancies, leadership support for ESG standards, pipeline of bankable projects, tools for tracking green investments and carbon credits, eco-friendly technologies, ESG compliance platforms, competitive financing terms

Key driving forces: Central banks, governments, environmental organizations, green investment funds, international donors, ministries of finance, environmental regulators

Selected Jurisdictions of Reference:
China, European Union, Ghana, India, Japan, Oman, Palestine, the Philippines, United States

Relevant AFI knowledge products:

Green Credit Guarantee Schemes for MSMEs

Climate Risk Insurance for the Agriculture Sector in Armenia

Reserve Bank of Fiji's Experience with Financial Inclusion and Climate Change

Roadmap for Inclusive Green Finance Implementation V.2

Green Transition Measures for MSMEs

Roadmap for Inclusive Green Finance Implementation

Leveraging Digital Financial Services to Advance Inclusive Green Finance Policies

Measuring Inclusive Green Finance

Integrating Inclusive Green Finance Policies into National Financial Inclusion Strategies

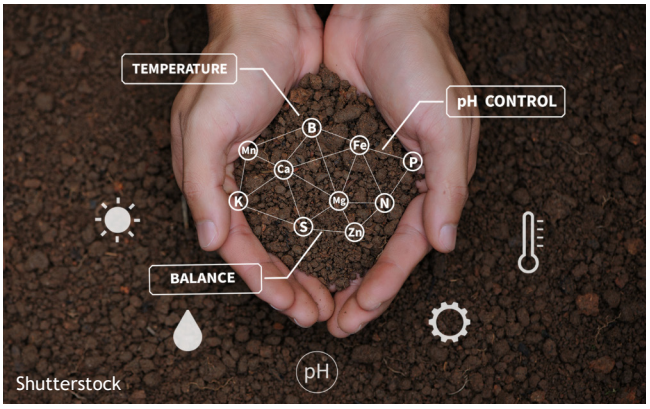
Greening the Financial Sector Through Provision Policies: The Role of Central Banks

Disaster Resilience Through Financial Inclusion

Inclusive Green Finance: From Concept to Practice

INDEX-BASED INSURANCE

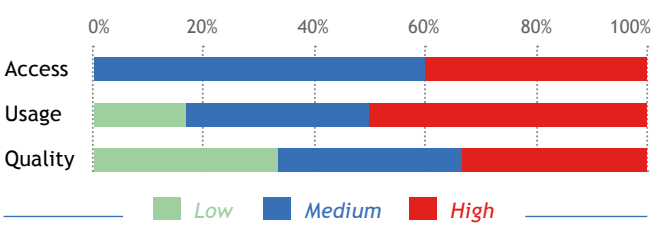
Index-based insurance provides coverage based on a predetermined index (e.g. rainfall levels) for losses related to assets and investments, primarily working capital, resulting from weather and catastrophic events. Unlike traditional insurance, it does not rely on claims assessors, allowing for faster and more objective claims settlement.



How the innovation advances financial inclusion:

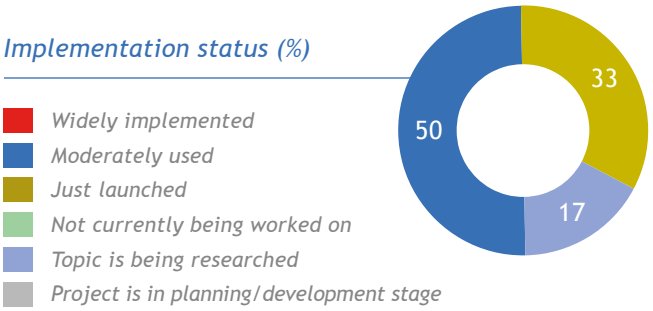
Developed in recent years as a promising alternative that could address the drawbacks of indemnity insurance, index-based products aim to address its limitations. Among the various types, such as area-yield and soil quality indices, weather index insurance (WII) has gained attention as a tool for helping farmers manage weather-related production risks by improving their financial capacity to adopt climate change adaptation practices. Many farmers have limited options for diversifying income sources and often lack risk management tools. As a result, they have little incentive to adopt new practices that could improve productivity and income but are perceived as risky. From this perspective, index-based insurance is seen as an instrument for promoting development in poor rural areas, especially in developing countries. According to the survey results, respondents believe that while this innovation may moderately improve access to financial services, it can greatly enhance their usage.

Impact on financial inclusion



Innovation in practice: AFI respondents highlighted the strong importance of this innovation for financial inclusion, though as a relatively recent development, it remains in the early stage of implementation.

Implementation status (%)



Importance (%)

Key policy enablers: Parametric insurance guidelines, interoperability, open APIs

Key market enablers: Collaboration among partners to design insurance products, mobile wallets, partnerships with telecom companies and InsurTech providers

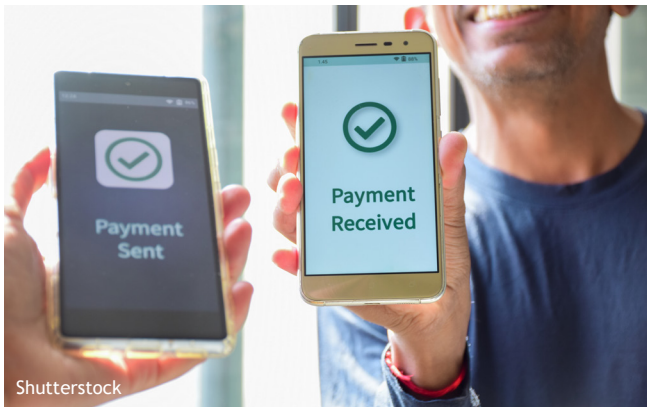
Key driving forces: InsurTech providers, insurance companies, insurance regulatory bodies

Selected Jurisdictions of Reference:

Australia, China, Fiji, Ghana, India, Kenya, Mali, New Zealand, Senegal

INSTANT PAYMENTS

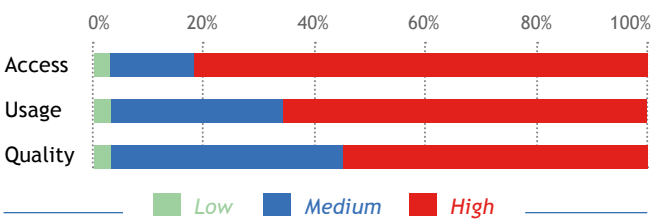
Instant payments refer to real-time payment systems that enable the immediate transfer of funds between bank accounts, regardless of the time or day. These transactions are processed around the clock, allowing users to send and receive money instantly without delays associated with traditional banking methods. By providing accessible, affordable, and immediate payment solutions, they help bridge the gap for underserved populations and promote economic participation.



How the innovation advances financial inclusion:

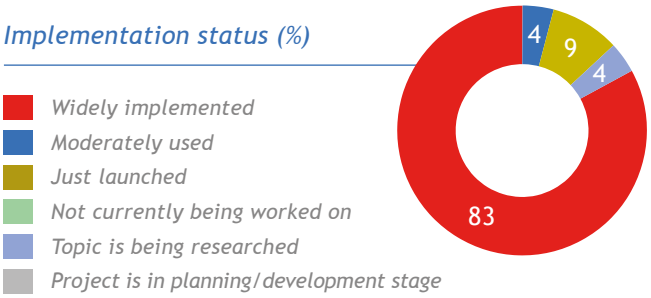
AFI respondents consider instant payments highly impactful for financial inclusion, especially in improving access. Real-time payments serve as a close substitute for cash and help reduce behavioral barriers to adopting non-cash payment methods, and lower transaction fees compared to traditional methods make instant payments more affordable for low-income populations. The immediate availability of funds further helps individuals manage their financial needs more effectively, particularly during emergencies. For small and medium enterprises, instant payments facilitate faster transactions, improve cash flow, and support business growth.

Impact on financial inclusion



Innovation in practice: AFI respondents highlight the high importance of this innovation for financial inclusion, which is reflected in its widespread implementation across the AFI member jurisdictions they represent.

Implementation status (%)



Importance (%)

Key policy enablers: Regulatory frameworks for digital payments and e-money regulations, interoperability, instant payment regulatory arrangements, consumer protection and dispute resolution, regulatory oversight by central banks for payment systems and e-money issuers, mandates for system compatibility and standards for instant payments, fee regulation on digital payment usage

Key market enablers: Automated clearinghouses, payment gateways, internet access, mobile phone penetration, smartphone penetration, mobile financial services, QR code payments, instant payments infrastructure, consumer education, mobile application platforms

Key driving forces: Market demand, consumers, financial institutions, central banks, financial regulators, ministries of finance

Selected Jurisdictions of Reference:

Australia, China, European Union, India, Jordan, Pakistan, Russia, Singapore, Sweden, United Kingdom

Relevant AFI knowledge products:

Transfer365 Instant Payment System in El Salvador

Payment Innovations and Risks in South Asia

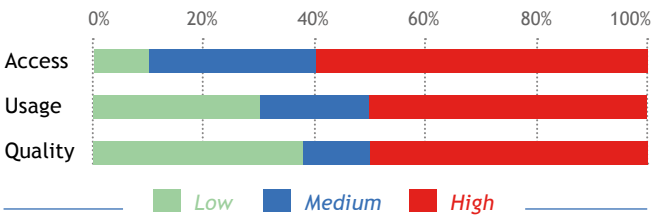
INSURTECH

InsurTech leverages AI, big data, and IoT to automate processes, improve risk assessment, and offer personalized insurance coverage, encompassing a variety of types and models:

- **AI/ML-enabled insurance:** uses AI to improve underwriting, personalize policies, automate claims, and enhance customer service through tools like chatbots and predictive analytics.
- **Blockchain-based insurance:** enhances transparency, prevents fraud, and streamlines claims processing. Smart contracts automate payments when certain conditions are met, reducing the need for traditional claims systems.
- **Parametric insurance:** coverage is triggered once a predefined parameter is met, such as a hurricane reaching a specific wind speed or an earthquake of a certain magnitude.
- **Telematics-and usage-based insurance (UBI):** vehicle insurance tailored to individual driving behavior, distance traveled, and other relevant indicators tracked through digital devices.

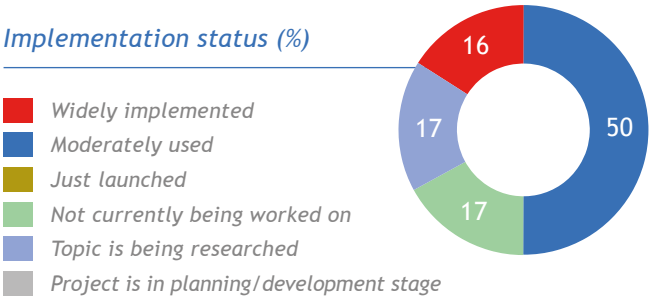
How the innovation advances financial inclusion: AFI respondents highlight the high impact of InsurTech on access to financial services, followed by its influence on usage and quality. Insurtech transforms conventional processes such as policy formulation, risk assessment, and customer interaction, improving operational efficiency and customer satisfaction. By leveraging real-time data analysis and advanced technologies like AI and big data, InsurTech enables more accurate pricing, improved risk evaluation, and stronger fraud prevention, ultimately expanding access to insurance coverage. This approach allows insurers to provide faster service, more personalized experiences, and innovative products, thereby increasing both the usage and quality of insurance services.

Impact on financial inclusion

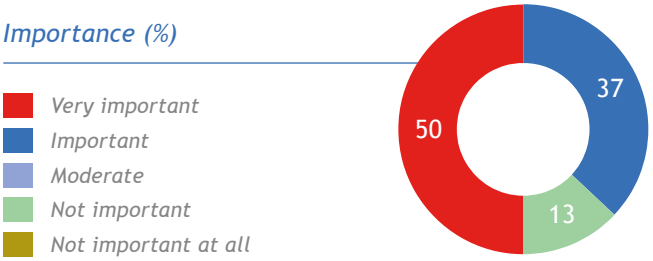


Innovation in practice: InsurTech is at the forefront of innovation in the insurance industry, significantly transforming traditional practices. Among AFI member respondents, 50 percent report it as moderately used, while 16 percent indicate it as widely implemented. About 37 percent consider it an important innovation, with a further 50 percent rating it very important.

Implementation status (%)



Importance (%)



Key policy enablers: Licensing for usage-based insurance models, consumer data protection, product disclosure regulations, unified KYC, e-KYC, interoperability, regulations ensuring risk-appropriate access to insurance products

Key market enablers: Mobile phone penetration, data collection, storage and access management solutions, AI/ML for claims processing, usage-based insurance tools, IoT-enabled devices for insurance data collection (e.g. vehicles)

Key driving forces: InsurTech companies, market demand, insurance companies, insurance regulatory bodies, manufacturers of insurable properties (e.g. vehicles and houses), manufacturers, data brokers

Selected Jurisdictions of Reference: United Kingdom, United States

INTEGRATED UNIVERSAL QR CODE PAYMENTS

Quick Response (QR) code payments are a contactless transaction method in which customers scan a QR code displayed by a merchant to authorize a payment through their mobile wallet or banking app. The QR code contains the necessary payment details, making the process fast and convenient.

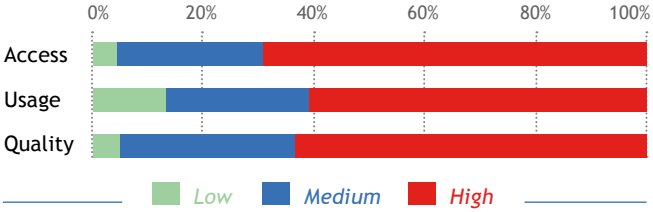
A QR code, a type of barcode with horizontal and vertical patterns that can be optically scanned and decoded, can be either static or dynamic. Static codes contain fixed information that cannot be changed, such as a link to a merchant's homepage, whereas dynamic codes can be edited and personalized for each transaction, for example by generating a unique bill for a customer at checkout.

Integrated universal QR is designed to provide interoperability across different payment schemes, allowing merchants to accept payments from various providers through a single merchant acquirer, using a QR code. Ideally, all digital tools (e.g. mobile apps) provided by payment service providers (PSPs) can scan the universal QR code and initiate payments seamlessly to the identified merchant.

Shutterstock

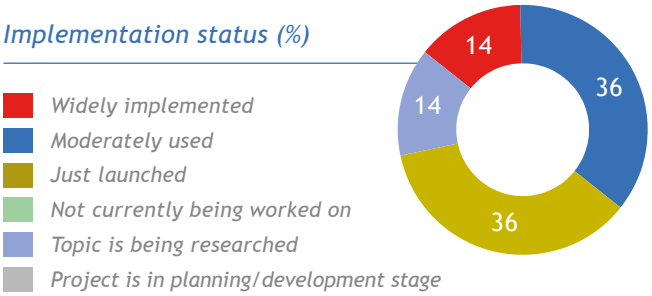
How the innovation advances financial inclusion: AFI respondents highlight the high impact of QR code payments across all pillars of financial inclusion, especially in improving access. Beyond simplifying payment transactions, QRcode payments offer inclusive financial benefits by allowing small businesses without point-of-sale (POS) terminals to accept payments using a printed QR code, enabling them to participate in the digital economy. QR-based systems not only provide valuable transaction data to payment platforms but also offer core benefits such as security, efficiency, and user-friendliness, making QR code payments a flexible, efficient, and accessible solution.

Impact on financial inclusion

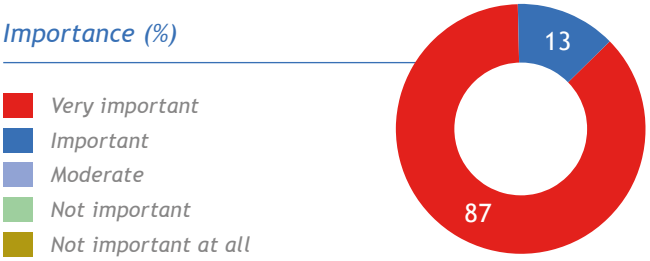


Innovation in practice: The innovation has gained recognition and is steadily expanding across AFI member countries represented in the survey. Respondents almost unanimously consider it very important for advancing financial inclusion.

Implementation status (%)



Importance (%)



Key policy enablers: Interoperability, QR code standards for payments, consumer protection

Key market enablers: Digital literacy, smartphone and internet penetration, merchant adoption, reliable internet connections, open APIs, secure QR code protocols, merchant integration platforms

Key driving forces: Small and medium enterprises, payment service providers, central banks, ministries of finance

Selected Jurisdictions of Reference: Australia, China, Ghana, India, Laos, Singapore, Thailand, United States

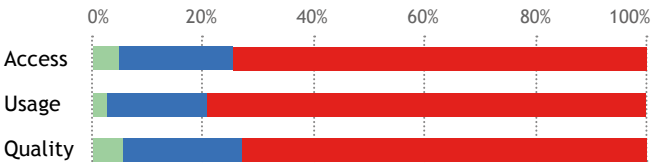
INTEROPERABILITY OF FINANCIAL SERVICES

Interoperability in financial services (wallets, QR payments, and others) refers to the ability of different platforms, regardless of differences in technology, business models, or other fundamentals, to exchange, process, and interpret data. This supports a seamless flow of payments and other financial services across multiple consumer accounts and transactions involving various service providers, enabling users to transact easily across services without barriers and facilitating smoother exchanges of money and information.

How the innovation advances financial inclusion:

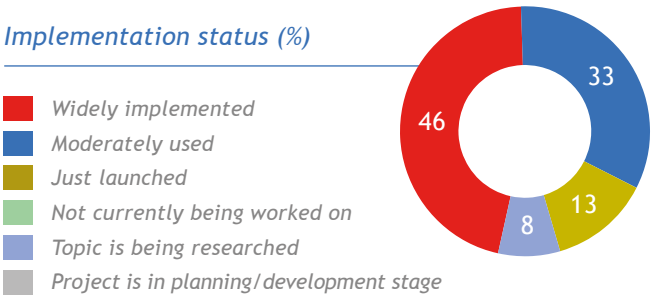
AFI respondents highlight the high impact of this innovation across all pillars of financial inclusion. Individuals in underserved or rural areas can access a wider range of financial services without needing multiple accounts, which is particularly beneficial for those without traditional bank accounts. Lower transaction fees make financial services more affordable for low-income users, encouraging greater use of digital financial tools. The ease and speed of transactions increase the likelihood that users embrace digital payments and related services, while interoperability, by enabling multiple platforms to work together, builds trust in a reliable system and further supports the use DFS. A more connected ecosystem also makes it possible to develop new financial products and services tailored to different user needs, helping further advance financial inclusion.

Impact on financial inclusion



Innovation in practice: AFI respondents largely view this innovation as very important and important for financial inclusion, with more than three-quarters reporting that interoperability is being implemented in their jurisdictions and 33 percent noting its moderate usage.

Implementation status (%)



Importance (%)

Key policy enablers: Demonetization, e-money, open APIs, national (payment) switch, clear guidelines and licenses for payment system providers, ensuring compliance with KYC and AML regulations, interoperability and compatibility standards, data sharing and data governance frameworks, ensuring consumer security in digital payments with guidelines on dispute resolution and fraud prevention

Key market enablers: Internet access, smartphone penetration, mobile networks and digital infrastructure, stable internet and electricity network standardized protocols, collaborative agreements among providers, automated clearing house infrastructure, real-time payment systems

Key driving forces: Market demand, financial institutions, payment service providers, central banks, telecommunication regulatory authorities

Selected Jurisdictions of Reference:

Australia, China, European Union, Fiji, Ghana, India, Kenya, Nigeria, Singapore, South Africa, Sri Lanka

Relevant AFI knowledge products:

Interoperability of Cross-border Remittance Systems in the EECA Region

Framework for Digital Financial Services Interoperability in Africa

Digitally-Enabled Cross-Border Remittances in Lesotho

Interoperability and Interconnectivity of Electronic Payment Methods and Financial Inclusion in Paraguay

MICROFINANCE AND CORRESPONDING PRODUCTS

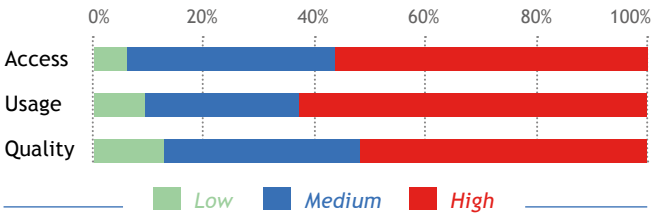
Microinsurance, microsavings, micropensions, microinvestment and other micro financial products

Microfinance is a business model focused on providing small-scale financial services such as loans, savings, money transfers, insurance, and investments, tailored to the needs of low-income households and underserved micro and small enterprises that often lack collateral, social connections, and financial education.

How the innovation advances financial inclusion:

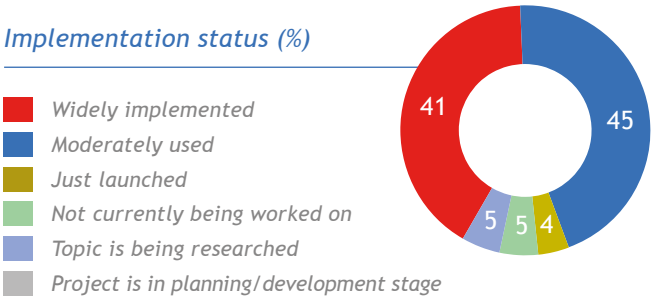
AFI respondents highlight the positive impact of microfinance across all pillars of financial inclusion, particularly in increasing the use of financial services. Microfinance expands access by offering smaller, more flexible products to customers who might otherwise avoid traditional financial services. It helps individuals who previously had limited access to financial tools develop a culture of savings and investing, and allows those with little credit history to build creditworthiness over time. By focusing on marginalized populations, especially women, microfinance empowers them to participate more fully in the financial system. When properly designed, microfinance can help break the cycle of poverty in developing countries and improve financial literacy. Usage is further enhanced by the greater convenience and reduced real or perceived friction that these products provide.

Impact on financial inclusion



Innovation in practice: The majority of AFI respondents consider microfinance very important or important for financial inclusion, with 41 percent reporting it is widely implemented, and another 45 percent noting it is moderately used.

Implementation status (%)



Importance (%)

Key policy enablers: Microfinance regulations, microfinance product licensing, consumer protection and financial literacy, tax policies and support for microfinance institutions

Key market enablers: Financial literacy, market focus on small-scale financial solutions, shared agent networks for rural areas, alternative credit scoring, low transaction fees

Key driving forces: Market demand, MSMEs, consumers, financial institutions, rural communities, central banks, ministries of finance

Selected Jurisdictions of Reference:
Bangladesh. Cambodia, China, Fiji, Ghana, India, Kenya, Mexico, the Philippines, Rwanda, Senegal, South Africa

Relevant AFI knowledge products:

Digital Transformation of Microfinance & Digitization of Microfinance Services to Deepen Financial Inclusion in Africa

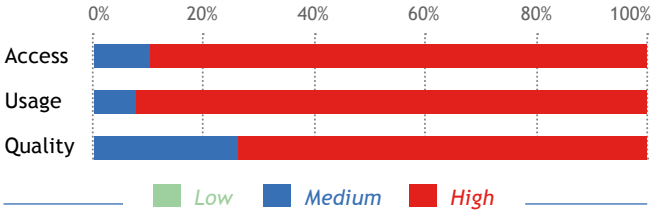
Policy Note: A tiered approach to regulating intermediation

MOBILE FINANCE

Mobile financial services (MFS) and related technologies cover a broad range of financial transactions performed on mobile phones or tablets. This includes both transactional and non-transactional services, such as viewing financial information. MFS also encompass mobile-enabled payment systems and mobile banking, offering secure and convenient transfers, payments, and savings through "mobile wallet" accounts.

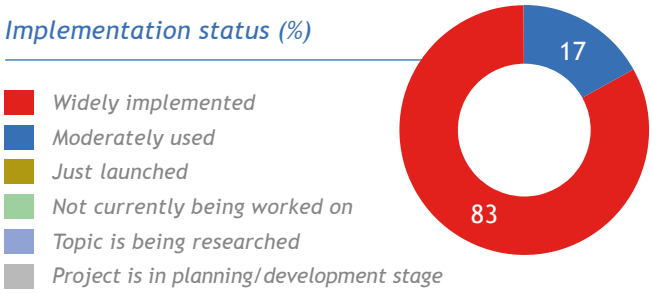
How the innovation advances financial inclusion: AFI respondents consider MFS a highly impactful innovation for financial inclusion. MFS plays a crucial role in providing unbanked and underbanked populations with access to essential financial services, promoting social and financial inclusion in cash-centric environments where the poorest struggle to save. The widespread availability of mobile phones creates a vast channel to reach and financially connect consumers at scale. By leveraging mobile technology, smartphones, and innovative mobile-first solutions, mobile banking apps are democratizing finance and empowering individuals to build better financial futures.

Impact on financial inclusion



Innovation in practice: The majority of AFI respondents highlight the importance of this innovation for financial inclusion, with nearly 90 percent rating MFS as very important and noting it is widely implemented across their jurisdictions.

Implementation status (%)



Importance (%)

Key policy enablers: Data privacy and protection, mobile wallet guidelines, e-KYC regulations

Key market enablers: Digital literacy, mobile phone penetration, internet access, telecommunications infrastructure, personalized finance products, universal mobile connectivity, outsourcing framework

Key driving forces: Financial institutions, mobile network providers, central banks, ministries of finance, telecommunication regulatory authorities

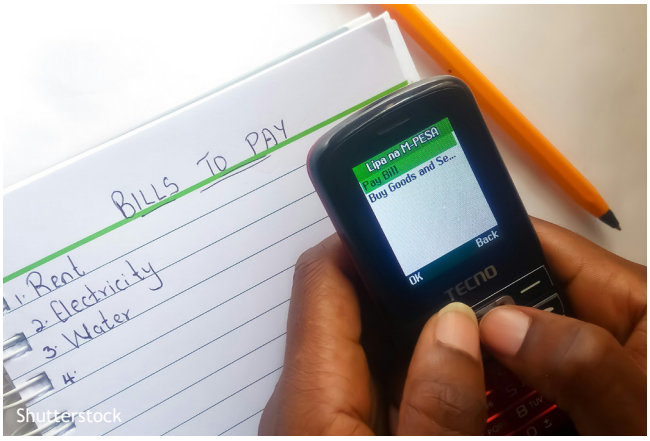
Selected Jurisdictions of Reference: Bangladesh, Fiji, Ghana, India, Jordan, Kenya, Nigeria, South Korea

Relevant AFI knowledge products:

Regulatory Approaches to Mobile Financial Services in Latin America
Smart Policies for Mobile Finance in the Americas: The Next Financial Inclusion Breakthrough?
The Role Regulators Play in Closing the Financial Inclusion Gender Gap: A Case Study of Fiji
The Role Regulators Play in Closing the Financial Inclusion Gender Gap: A Case Study of Ghana
Payment Innovations and Risks in South Asia
Regulatory Approaches to Digital Payments Transaction Costs in Sustaining Financial Inclusion in Africa
Guideline Note 15: Mobile Financial Services - Accessing Levels of Interoperability
Guideline Note 14: Mobile Financial Services - Mobile-Enabled Cross-Border Payments
Guideline Note 13: Consumer Protection in Mobile Financial Services
Guideline Note 12: Mobile Financial Services - Supervision and Oversight of MFS
Guideline Note 11: Mobile Financial Services - Indicators for Measuring Access and Usage
Guideline Note 3: Mobile Financial Services - Regulatory Reporting
Guideline Note 2: Mobile Financial Services - Technology Risks
Guideline Note 1: Mobile Financial Services - Basic Terminology
Pacific Islands Working Group (PIWG): Mobile financial services - Regulatory action planning tool
Policy Reflections: Leveraging the success in Mobile Financial Services to expand financial inclusion
Case Study 1: The Central Bank of Kenya's treatment of M-Pesa

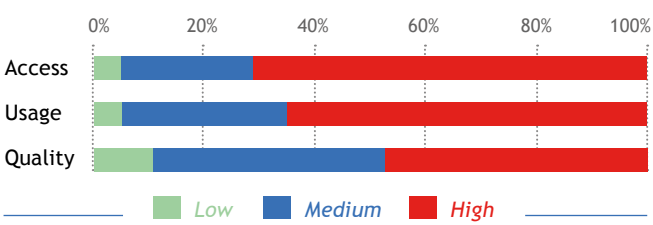
MOBILE FINANCIAL EDUCATION

Mobile financial education (MFE), which leverages mobile technology to deliver educational resources that enhance financial literacy, uses a range of formats such as mobile apps, SMS, videos, and interactive games to engage users. By providing information directly to mobile devices, MFE overcomes geographical and educational barriers, allowing individuals to learn about managing finances at their own pace and offering on-demand financial education.



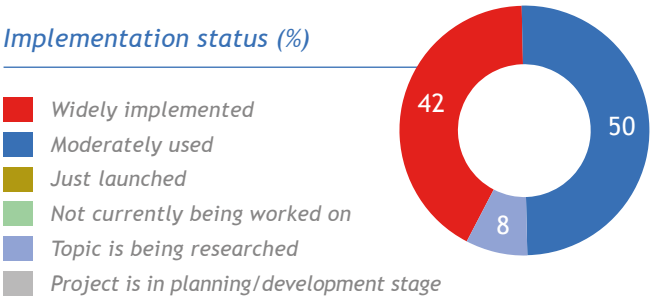
How the innovation advances financial inclusion: AFI respondents view MFE as having a strong impact on access and use of financial services with a lesser impact on the usage dimension of financial inclusion. MFE improves knowledge of financial products and services, empowering users to make informed decisions about budgeting, saving, and investing. By educating individuals on how to use financial products, it encourages uptake of banking, insurance, and investment services, especially among low-income populations. This knowledge can lead to positive changes in financial behaviors such as increased savings and reduced reliance on high-cost borrowing. Targeted MFE initiatives also help women, youth, and rural populations overcome traditional barriers to financial inclusion.

Impact on financial inclusion

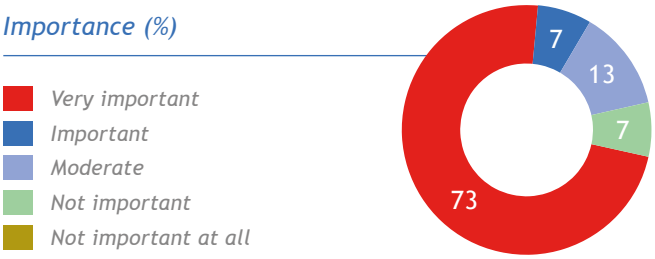


Innovation in practice: AFI respondents widely recognize the importance of MFE for financial inclusion, with 92 percent reporting it as either widely implemented or moderately used in their countries.

Implementation status (%)



Importance (%)



Key policy enablers: Financial inclusion strategies, financial literacy initiatives, national digital literacy initiatives, initiatives to integrate underserved populations through mobile and digital platforms

Key market enablers: Mobile phone (including smartphone) penetration, internet access, reliable electricity networks, financial literacy campaigns and media support, digital content platforms, gamified learning tools

Key driving forces: Financial institutions, governments, donor agencies, central banks, financial regulators, ministries of finance

Selected Jurisdictions of Reference:
India, Kenya, Maldives, Nepal, Nigeria, United States

Relevant AFI knowledge products:

Repository of Virtual Tools for Financial Literacy
Policy Note on Digital Financial Literacy for ASEAN
Digital Financial Literacy Toolkit
National Financial Education Strategies Toolkit
The Guideline Note on Digital Financial Literacy

MOBILE POINT-OF-SALE SOLUTIONS

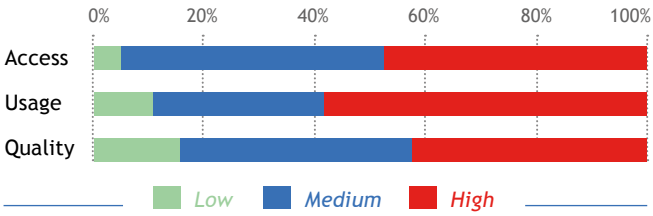
Mobile point-of-sale (MPOS) solutions are technologies that enable business owners to receive card payments via a tablet or smartphone, allowing them to operate beyond fixed locations and offering increased flexibility for both owners and customers. Beyond processing transactions, advanced MPOS can also support inventory management, customer loyalty programs, sales metrics, and more.

How the innovation advances financial inclusion:

AFI respondents have mixed views on the overall impact of MPOS on financial inclusion, except for its effect on the usage of financial services. MPOS allow business owners to accept digital payments, bringing a range of financial services to previously underserved populations and increasing financial inclusion by encouraging individuals to use digital payments, which also reduces cash dependency. For small entrepreneurs and business owners, MPOS makes it easier to start a business and build a transaction history that can later serve as credit history, improving access to traditional financial services. MPOS also makes non-cash payments more affordable for businesses, as they typically require lower investments compared to conventional POS terminals.

As a result, MPOS improves access as more sellers and merchants gain POS functionality through their mobile devices. Usage increases as consumers prefer contactless and cashless payment methods, supported by a wider availability of POS terminals including MPOS. The quality of financial services also improves since MPOS software is more accessible and easier to update and maintain than traditional standalone POS terminals.

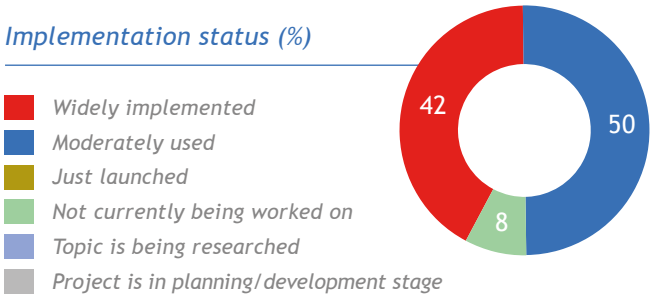
Impact on financial inclusion



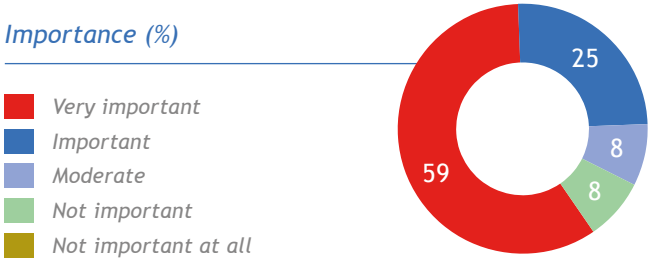
Innovation in practice:

AFI respondents agree on the importance of MPOS for financial inclusion. Among AFI members, 42 percent reported that MPOS is widely implemented, while 50 percent note it is moderately used in their jurisdictions.

Implementation status (%)



Importance (%)



Key policy enablers:

Digital payments regulations, regulation of mobile payment solutions, data protection and consumer protection regulations

Key market enablers:

Affordable mobile internet access, smartphone penetration, reliable electricity networks, contactless payment technology (near-field communication), mobile banking

Key driving forces:

FinTech companies, payment service providers, central banks

Selected Jurisdictions of Reference:

Brazil, Ghana, India, Kenya, Nigeria, United States

Relevant AFI knowledge products:

Driving Digital Financial Services in Africa Through Merchant Acceptance of Digital Payments

NFC PAYMENTS

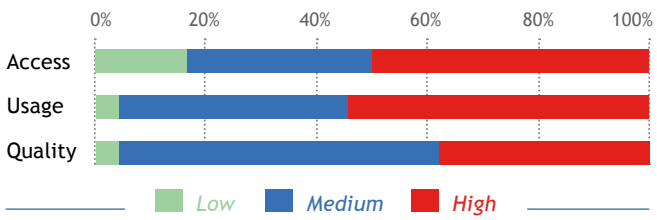
Near-field communication (NFC) payments are digital payments enabled through devices such as plastic cards, mobile phones, stickers, rings, and others equipped with NFC chipsets that act as authentication tokens when communicating with POS terminals and similar devices. NFC technology connects two NFC-enabled devices within a few inches of each other to transmit payment information. A key differentiator with NFC mobile payments is the two-way encryption, which makes them more secure than swiping or inserting a credit or debit card.

Shutterstock

How the innovation advances financial inclusion: AFI respondents expressed mixed views on the impact of NFC payments on financial inclusion, especially in terms of the quality of financial services. NFC not only serves existing customers but also extends financial service access to underserved communities. With NFC-enabled solutions like mobile banking apps and digital wallets, individuals with limited access to traditional banking services can more easily use financial services.

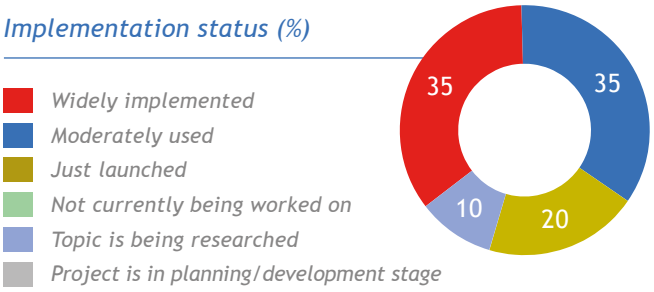
NFC payment systems help reduce reliance on cash, which can be costly, risky, and inefficient, while also lowering operational costs and risks for merchants and customers, and they offer faster, easier, and more convenient transactions than some other digital payment methods.

Impact on financial inclusion

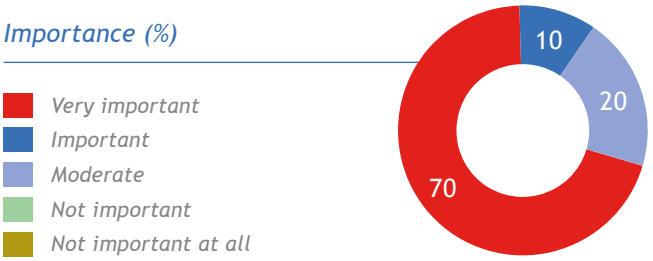


Innovation in practice: AFI respondents highlight the importance of this innovation for financial inclusion. Acceptance of NFC payments is growing among the countries represented, with 70 percent of respondents reporting that it is already either widely implemented or moderately used.

Implementation status (%)



Importance (%)



Key policy enablers: Payment regulations, interoperability, open APIs, dispute resolution mechanisms, digital IDs

Key market enablers: Digital literacy, smartphone and internet penetration, NFC hardware providers, merchant POS infrastructure, mobile device and POS terminal integration, contactless technologies, customer awareness, trust

Key driving forces: Banks, FinTech companies, payment service providers, central banks, ministries of finance, ministries of science and technology

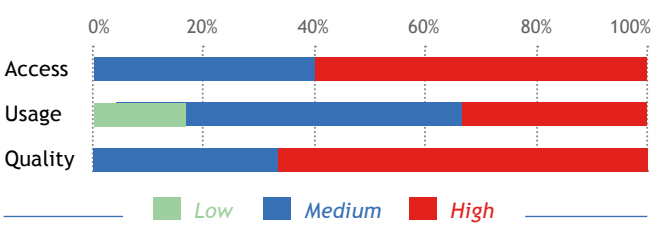
Selected Jurisdictions of Reference: Australia, Canada, China, Japan, Kenya, South Africa, South Korea, Sweden, United Kingdom, United States

OMNICHANNEL BANKING

Omnichannel banking refers to a strategic approach that integrates different customer interaction channels to provide a seamless and cohesive banking experience. This innovation combines traditional banking methods, such as physical branches, with digital channels like mobile apps, online banking, social media, and call centers. The goal is to let customers move easily between platforms while accessing banking services, enhancing convenience, accessibility, and user satisfaction.

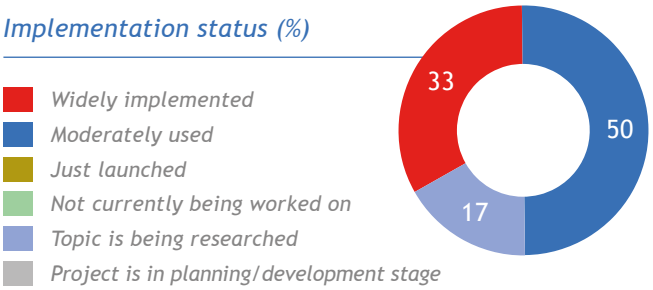
How the innovation advances financial inclusion: AFI respondents are largely positive about the impact of this innovation on financial inclusion, especially regarding access and the quality of financial services. By offering multiple channels, omnichannel banking makes financial services more accessible to underserved populations, including those in remote or rural areas who may have limited access to physical branches. Financial service providers can also use these channels to educate customers about products and services, promoting greater understanding and awareness, particularly among low-income groups. Furthermore, digital services can lower operational costs for banks, allowing them to offer more affordable financial products and services tailored to low-income users. Providing consistent and transparent information across all channels builds customer trust in financial institutions, encouraging previously unbanked individuals to engage with the banking system.

Impact on financial inclusion

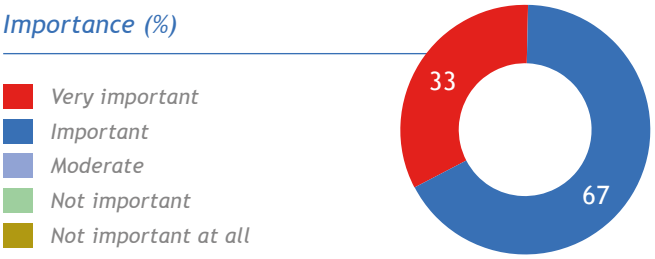


Innovation in practice: AFI respondents highlight the growing importance of omnichannel banking for financial inclusion, as well as its expanding implementation across the countries they represent.

Implementation status (%)



Importance (%)



Key policy enablers: Comprehensive regulatory framework for digital and branchless banking, data privacy and security regulations, cybersecurity regulations, interoperability, regulations governing the participation of non-bank entities in providing financial services, open APIs, consumer protection

Key market enablers: Digital infrastructure, internet access, mobile phone (including smartphone) penetration, high-speed internet access, integrated CRM systems

Key driving forces: Financial institutions, central banks

Selected Jurisdictions of Reference: Brazil, Ghana, India, Kazakhstan

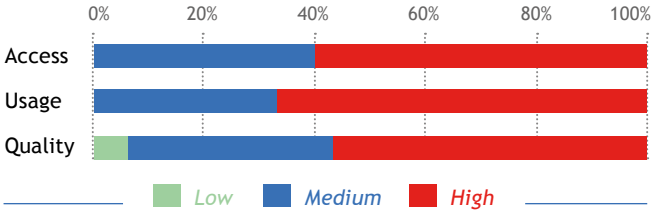
OPEN API STANDARDS

Open API standards are a policy innovation designed to establish and enforce standards and security protocols describing the structure, capabilities, and endpoints of software applications, enabling seamless integration so that banks and other incumbent financial organizations can securely share customer financial data and provide customers with digital services through authorized FinTech providers. By enabling third parties to access financial data and initiate payments or other operations on behalf of customers, Open API promotes the development of innovative applications and services for banking users.

How the innovation advances financial inclusion:

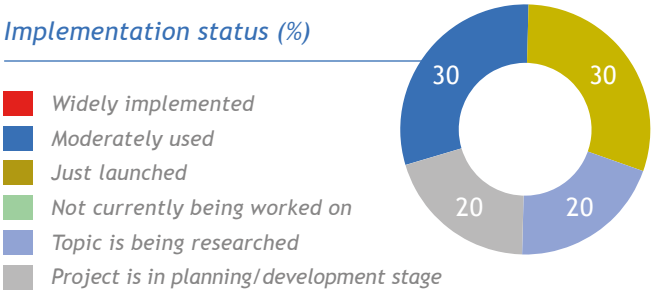
AFI respondents highlight the strong impact of Open API on financial inclusion, as it benefits consumers by providing greater access, control, and transparency over their finances. FinTechs can rapidly grow their customer base by accessing bank data to build innovative services, while banks can reduce costs, generate revenue, collaborate with FinTechs, and remain competitive in a changing industry. Open API supports financial inclusion by reducing costs and improving customer access, fit, and experience, thereby facilitating greater competition and collaboration among financial service providers including banks, microfinance institutions, and technology companies, while giving customers more options to manage their finances, making it easier to switch between institutions, and encouraging the development of more personalized products and services.

Impact on financial inclusion



Innovation in practice: Open API is considered quite important for financial inclusion, but its implementation remains in the early stages. Among respondents' jurisdictions, implementation is evenly split, with 30 percent reporting moderate use and another 30 percent indicating that deployment has just begun.

Implementation status (%)



Importance (%)

Key policy enablers: Open finance regulations, cybersecurity requirements, data protection regulations with liability frameworks for data breaches, interoperability, consumer protection

Key market enablers: Cost of implementation and maintenance, management of security risks, API support in core financial software, collaboration among institutions, internet access, reliable electricity, fast internet speeds, digital transformation, developer ecosystems

Key driving forces: Market demand, FinTech companies, central banks, ministries of finance

Selected Jurisdictions of Reference:
Australia, Brazil, European Union, Hong Kong, India, Mexico, Nigeria, Singapore, South Korea, United Kingdom

Relevant AFI knowledge products:

Policy Development and Implementation Guide for Inclusive Open Finance

Consent, Convergence and Data Protection: Cornerstones for the Success of Inclusive Open Finance

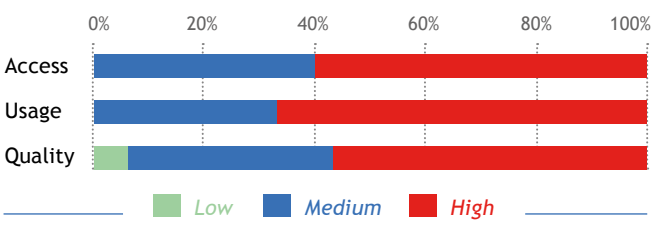
OPEN FINANCE

Open finance (banking, data, infrastructure, interoperability, superapps) is a set of principles that enables horizontal communication and interoperability between the digital systems of financial institutions, allowing access to functionality and data by other financial institutions and third-party entities. In its most basic form, it covers payments and interoperability among service providers. Expanding beyond payments, open finance includes all financial services such as deposits, loans, securities, insurance, trade financing, and more.

How the innovation advances financial inclusion:

AFI respondents expressed reserved views on the impact of open finance on financial inclusion, except regarding the quality of financial services. Open finance improves access by allowing incumbent institutions to open their systems to third party businesses, enabling the introduction of innovative financial products that make finance more accessible. It improves usage by creating a more interconnected ecosystem with greater variety and opportunities for customers, while also elevating quality through healthy competition and wider adoption of best practices in an open system with an expanding range of products.

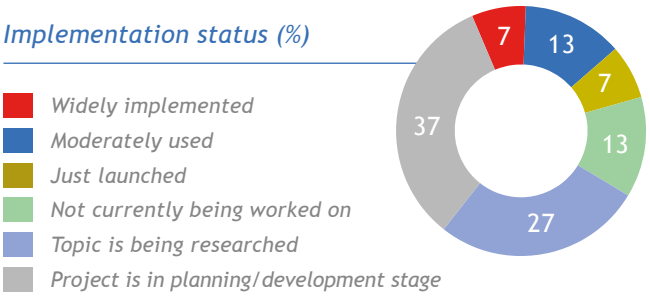
Impact on financial inclusion



Innovation in practice:

AFI respondents highlight the high importance of open finance for financial inclusion. However, the innovation is in the early stages of deployment, with only 20 percent reporting it as widely implemented or moderately used in their jurisdictions.

Implementation status (%)



Importance (%)

Key policy enablers:

Open finance strategies, interoperability, special license regime for FinTechs, regulatory sandboxes, digital IDs

Key market enablers:

Advanced core software providers, data integrity and infrastructure, smartphone penetration, reliable electricity networks, digital transformation, widespread implementation of APIs, mobile banking, cloud infrastructure, robust internet infrastructure

Key driving forces:

Market demand, consumers, FinTech companies, financial service providers, central banks, ministries of finance

Selected Jurisdictions of Reference:

Argentina, Australia, Brazil, Chile, Colombia, European Union, India, Portugal, South Korea, United Kingdom

Relevant AFI knowledge products:

Policy Development and Implementation Guide for Inclusive Open Finance

Consent, Convergence and Data Protection: Cornerstones for the Success of Inclusive Open Finance

OUTSOURCING

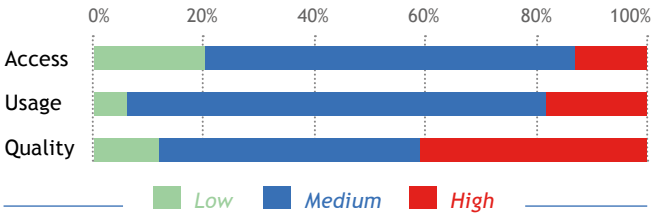
Outsourcing involves the contracting out of a company's activities to third parties to reduce costs or increase efficiency, enabling financial service providers to expedite delivery, reduce operational costs, and enhance efficiency by consolidating and centralizing core activities. Providers that keep everything in-house often create vertically integrated silos, resulting in duplication and redundancy across businesses and markets. Common types include IT outsourcing, where third party providers manage specific applications for financial institutions.

How the innovation advances financial inclusion:

Most AFI respondents consider outsourcing as having a moderate impact on financial inclusion, except regarding the quality of financial services. Outsourcing technology and software development allows institutions to accelerate service delivery while increasing affordability, making financial services more accessible to people in remote or underserved areas. By outsourcing operations such as customer service, transaction processing, or compliance monitoring, institutions can reduce costs and offer more affordable products to low-income or rural populations who may not be able to afford traditional banking. Outsourcing can also involve training and capacity building for local organizations, helping them manage financial products more effectively and build trust in regions with limited financial literacy. Technology and data analysis vendors can develop more tailored financial products for previously excluded groups, such as customized loans, low minimum savings accounts, or micro-insurance designed for low-income populations.

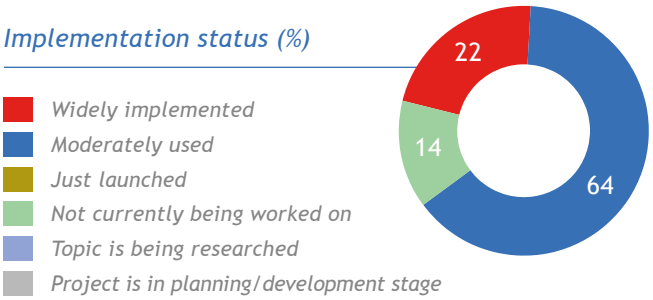
Outsourcing carries vendor-related risks, including vendor lock-in, cybersecurity, operational, and governance risks. Financial regulators must develop and issue regulations addressing these risks and guide institutions to conduct proper due diligence before engaging vendors.

Impact on financial inclusion

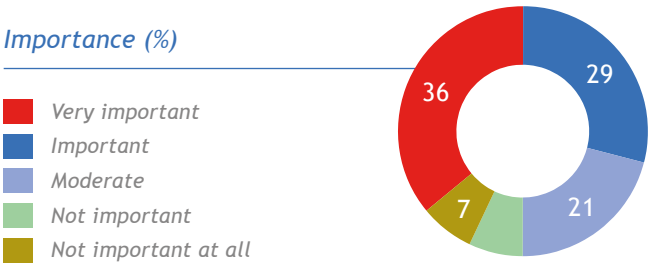


Innovation in practice: AFI respondents highlight the importance of outsourcing for financial inclusion. Over 80 percent report it as implemented in their jurisdictions, with 22 percent noting wide implementation.

Implementation status (%)



Importance (%)



Key policy enablers: Labor and employment laws, data protection and privacy regulations, outsourcing guidelines (including cross-border outsourcing), data protection (including cross-border data sharing), risk management frameworks

Key market enablers: High remuneration differentials between financial service providers and outsourcing companies, strong digital infrastructure and connectivity

Key driving forces: Market demand, financial service providers, payment service providers, central banks, regulatory authorities

Selected Jurisdictions of Reference: Canada, European Union, Ghana, Japan, United Kingdom, United States

Relevant AFI knowledge products:

Supervision of outsourcing of digital services by banks

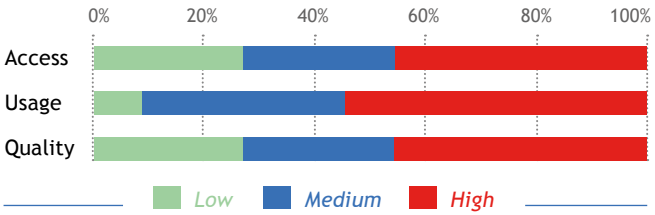
PAY-AS-YOU-GO

Pay-As-You-Go (PAYG) is a financing technology that allows end users to pay for goods in regular installments (mostly weekly) or whenever they have available funds. PAYG systems vary, with a simple model using recharge scratch cards that reveal a code under a silvery layer. Customers enter this code into their device or phone, which is verified by backend computer systems before the operator unlocks the service. Another system sends codes to customers via SMS, often working through agents who play an important role in rural areas where mobile money use is limited or literacy levels are low.

How the innovation advances financial inclusion:

AFI respondents consider PAYG as having a significant impact on financial inclusion, especially in the usage of financial services. PAYG makes new, unconventional solutions, such as green energy products, affordable for low-income populations by allowing payment in small installments rather than upfront cash purchases. Companies not only provide products and services but also the necessary financing. PAYG is transforming the credit system by removing initial financial barriers to untested or costly products such as solar energy batteries, allowing consumers to pay modest amounts over time to purchase usage units instead of paying upfront for the entire system.

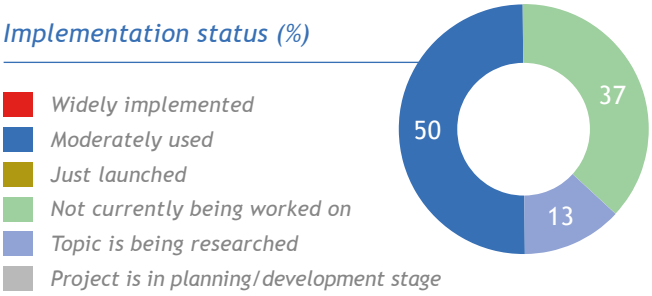
Impact on financial inclusion



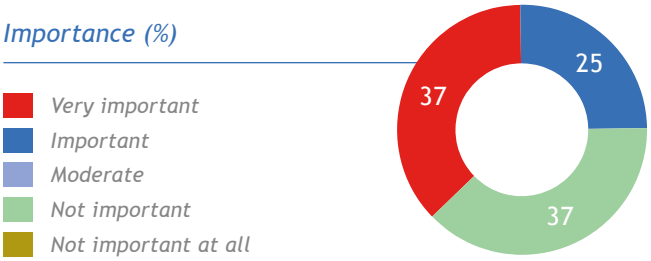
Innovation in practice:

AFI respondents generally consider this innovation important for financial inclusion, though its role remains uncertain as nearly 40 percent view PAYG as not important. This uncertainty is reflected in its deployment, with only 50 percent of respondents reporting moderate use of PAYG in their jurisdictions.

Implementation status (%)



Importance (%)



Key policy enablers:

Regulatory regime that allows the development of innovative financial solutions, legal restrictions on acceptable collateral within financial systems, data privacy, consumer protection, e-KYC

Key market enablers:

Consumer awareness of PAYG models, access to finance for local energy service providers, demand-based consumption tracking mechanisms, smartphone penetration, reliable electricity networks, alternative credit scoring, reliable payment systems

Key driving forces:

Low-income consumer groups, energy and retail sectors, central banks, ministries of finance, ministries of science and technology

Selected Jurisdictions of Reference:

India, Kenya, Nigeria, Peru, Singapore

Relevant AFI knowledge products:

Integrating Inclusive Green Finance Policies into National Financial Inclusion Strategie

Policy Framework for Responsible Digital Credit

PAYMENT SWITCH

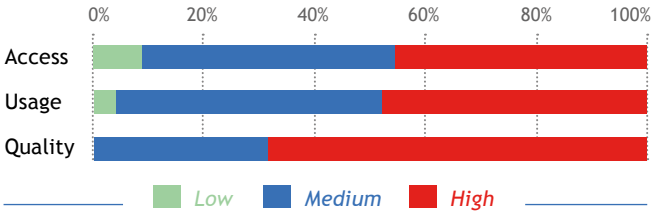
A payment switch is software that routes electronic payments between different payment methods and financial institutions, acting as a hub that connects payment cards, instant payment systems, and e-wallets with multiple payment service providers (PSPs).

A key retail function of a payment switch is allowing consumers to make payments using any PSP's payment arrangements with funds from accounts held at other PSPs. At its simplest, this enables transfers between bank accounts and e-wallets (including between e-wallets), assuming consumers hold accounts or wallets with those PSPs. More advanced switches allow consumers to initiate payments via a PSP they do not have an account with, using funds from a different PSP.

How the innovation advances financial inclusion: AFI respondents generally view this innovation as having a high impact on financial inclusion, particularly on the quality of financial services. A payment switch allows consumers to hold a single account with any PSP and access payment arrangements from many (ideally all) others in the ecosystem. This eases the burden on vulnerable consumers, who no longer need multiple accounts to access their payment services. Payments switches also simplify PSP integration into a unified ecosystem, improving market access for SMEs.

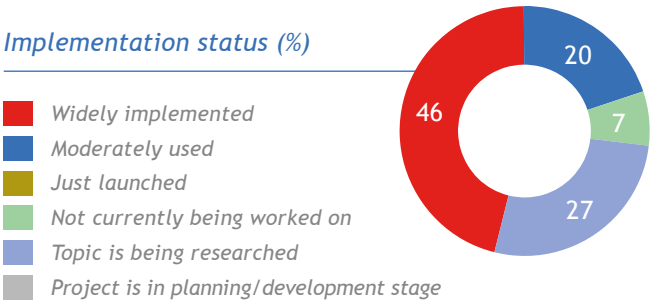
Payment switches improve financial inclusion by expanding interoperability, encouraging more consumers to open accounts with PSPs. Offering a wider range of payment options would encourage existing account holders to use their accounts more frequently, while the availability of diverse payment methods from every payment service provider enhances the overall quality and convenience of financial services.

Impact on financial inclusion

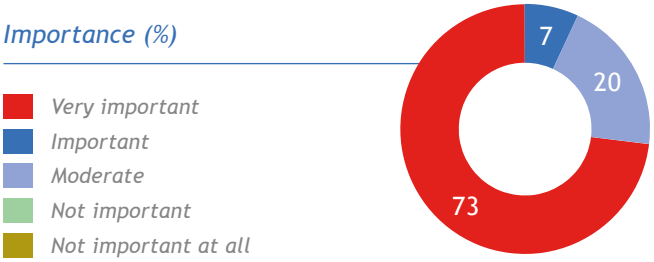


Innovation in practice: AFI respondents highlight the high importance of this innovation for financial inclusion. Two-thirds of respondents reported that their countries have already implemented a payment switch, with nearly 50 percent noting moderate usage.

Implementation status (%)



Importance (%)



Key policy enablers: Payment gateway regulations, interoperability, cybersecurity regulations, data protection regulations, payment regulations (including retail payments), open APIs

Key market enablers: Larger-scale payment enablement, smartphone penetration, reliable electricity network, stable and reliable internet network, digital and mobile banking, secure and scalable technology infrastructure

Key driving forces: Payment service providers, market demand, FinTech companies, financial service providers, central banks

Selected Jurisdictions of Reference:
European Union, India, Kenya, United States

REGTECH

RegTech is an innovative subsector of FinTech that leverages technology to address compliance and risk management challenges faced by organizations across various industries, including financial services, with the goal of facilitating adherence to legal and regulatory standards through technology-driven solutions. This may include automation, data analysis, and other RegTech tools designed to simplify and streamline compliance processes.

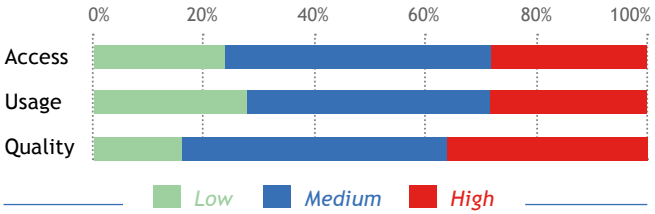
Shutterstock

How the innovation advances financial inclusion:

AFI respondents consider RegTech as having a mostly moderate impact on financial inclusion. It simplifies customer onboarding processes by using innovative e-KYC technologies such as biometric authentication and digital ID systems, making the process more efficient.

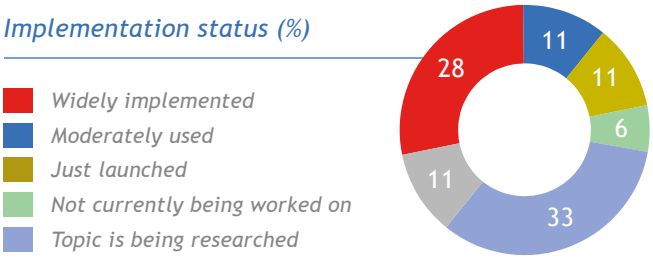
RegTech also promotes financial inclusion through improved monitoring, easier access (especially in rural communities), lower costs, and more effective targeting of unbanked populations with technologies tailored to each use case.

Impact on financial inclusion

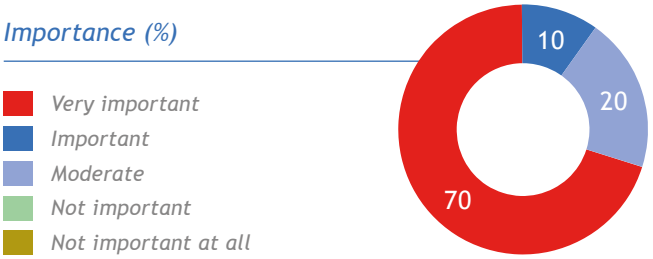


Innovation in practice: AFI respondents highlight the importance of RegTech for financial inclusion. However, only around 40 percent reported wide implementation or moderate usage in their jurisdictions.

Implementation status (%)



Importance (%)



Key policy enablers: Reporting standards for financial service providers, data protection, cybersecurity, AML/CFT regulations, open APIs

Key market enablers: Data-driven technologies, AI, machine learning, technological infrastructure, accuracy of data and RegTech results, reliable communication and electricity networks, standardized data points, RegTech tools, advanced data analytics, automation technologies

Key driving forces: Market demand, financial service providers, international regulatory requirements, central banks, financial regulators

Selected Jurisdictions of Reference:

European Union, Ghana, Rwanda, Singapore, United Kingdom, United States

Relevant AFI knowledge products:

Regulatory and supervisory technologies for financial inclusion

Developing an Agent Registry System as a RegTech Tool in the Philippines

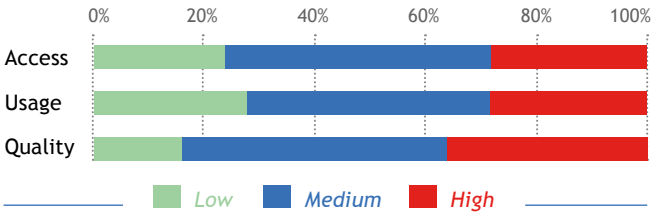
Case Study on Bank Supervision Application

REGULATORY SANDBOX

A regulatory sandbox is a policy innovation that facilitates an environment where firms can test new products, services, business models, and even policies in live environment under the supervision of a regulator. The goal is to encourage innovation in a safe and responsible way.

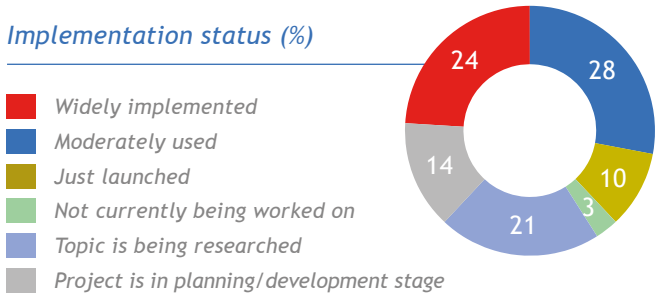
How the innovation advances financial inclusion: AFI respondents indicate a moderate impact of regulatory sandboxes on financial inclusion. By allowing the testing of innovative solutions, sandboxes help develop products designed for underserved populations, including low-income individuals and small businesses. Through sandboxes, FinTech startups can enter the market without facing the high costs and lengthy processes typically associated with obtaining regulatory licenses, which promotes greater competition and diversity in financial services. The sandbox environment also supports the creation of solutions designed specifically for those with limited access to traditional banking services, such as digital payment systems and micro-lending platforms.

Impact on financial inclusion

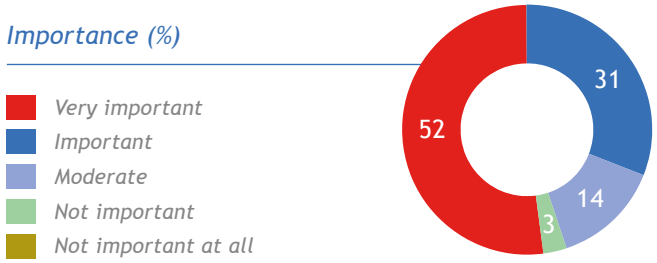


Innovation in practice: AFI respondents highlight the importance of this innovation for financial inclusion. Over half report that regulatory sandboxes are either widely implemented or moderately used in their jurisdictions.

Implementation status (%)



Importance (%)



Key policy enablers: Regulatory sandbox guidelines, proportionate regulatory frameworks, regulations that are balanced and fit the scale of innovation, special license regimes for emerging FinTech services and startups, intellectual property protections

Key market enablers: Vibrant innovation ecosystems, digital transformation, data infrastructure

Key driving forces: Digitization and financial development agendas, market demand, financial service providers, central banks, financial regulators, ministries of finance, agencies for innovation and digital technology

Selected Jurisdictions of Reference: Australia, European Union, Fiji, Ghana, Hong Kong, Kazakhstan, Palestine, Papua New Guinea, Rwanda, Senegal, Singapore, United Arab Emirates, United Kingdom, Uzbekistan

Relevant AFI knowledge products:

Pacific Regional Regulatory Sandbox Guidelines

Innovative Regulatory Approaches Toolkit

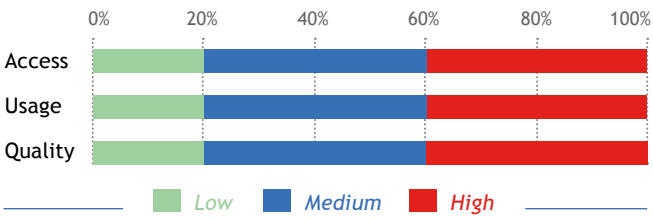
ROBO-ADVISORY

A robo-advisor is an automated financial advisor that provides algorithm-driven financial planning and investment services with little to no human involvement. Robo-advisors usually tailor investment strategies to individual investors, offering asset allocation based on each customer's financial goals, time horizons, and risk appetite.

How the innovation advances financial inclusion: AFI respondents expressed reserved views on the impact of robo-advisors on financial inclusion. Robo-advisors have the potential to meet the needs of many underserved middle-class investors as traditional human advisors often face high customer acquisition costs and time constraints, resulting in high minimum investable asset requirements. In contrast, robo-advisors impose much lower minimums and typically charge lower fees, making sophisticated investment strategies accessible to a broader audience. This makes them especially attractive to investors with smaller portfolios, where fees have a greater impact on overall net worth. Most robo-advisors invest in low-fee exchange-traded funds and offer user-friendly interfaces, simplified investment processes, and round-the-clock access, giving individual investors convenience and control over their portfolios.

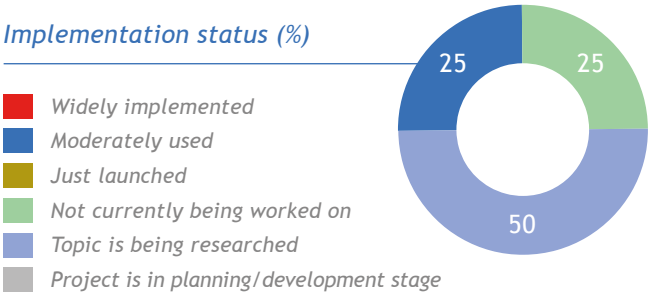
Robo advisors improve access by lowering minimum asset requirements and service costs. They may increase the usage of investment services by offering more insights to a wider range of investors. However, improvements in quality depend on how effectively their tools collect, refine, and analyze data to deliver useful investment advice.

Impact on financial inclusion

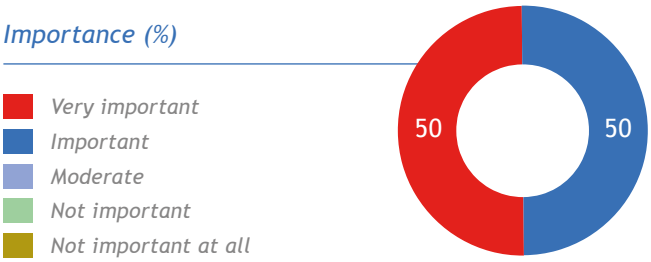


Innovation in practice: This market is experiencing rapid growth due to increasing adoption of DFS and technological advancements. More investment platforms are offering robo-advisors as digital financial advisors alongside traditional investment services. Among AFI member respondents, 50 percent indicated related projects are in development and 25 percent reported moderate usage, with half rating the innovation as important and the other half as very important.

Implementation status (%)



Importance (%)



Key policy enablers: Investor education, regulations that reflect the capabilities and limitations of robo-advisors and promote informed decision-making, regulatory standards for risk-based usage, customer protection, data sharing regulations

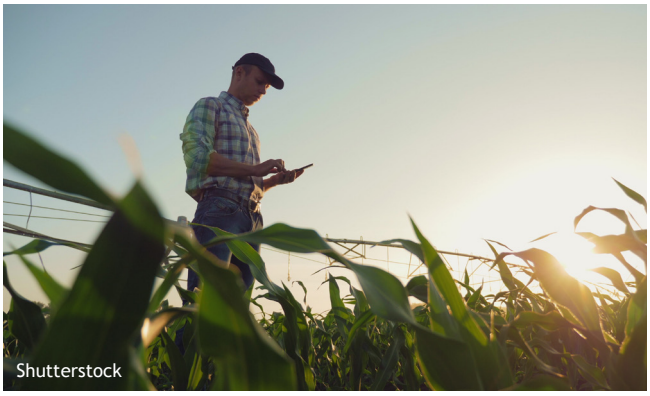
Key market enablers: Customer awareness, artificial intelligence

Key driving forces: Market demand, financial service providers, securities and exchange commissions

Selected Jurisdictions of Reference:
Australia, Brazil, Canada, Germany, India, Japan, Singapore, United Kingdom, United States

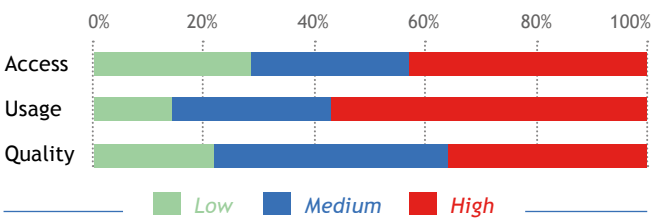
SUPPLY CHAIN FINANCE

Supply chain finance (SCF), including factoring and reverse factoring, refers to a set of innovative financial tools that facilitate the flow of capital within supply chains by optimizing working capital and improving cash flow. It enables businesses to access funds against their receivables and payables, providing immediate liquidity to suppliers without the delays of standard payment terms, which makes these innovations particularly relevant for SMEs that often struggle to access traditional financing.


Shutterstock

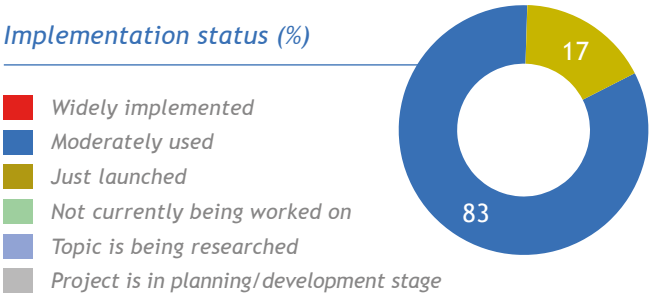
How the innovation advances financial inclusion: AFI respondents highlight the high importance of SCF for financial inclusion, except in terms of financial services usage. SCF solutions give SMEs, especially in developing regions, better access to working capital, which is critical for businesses lacking credit history or collateral. By enabling quicker access to funds, SCF helps businesses maintain healthy cash flow so they can invest in growth, manage expenses, and respond to market demands more effectively. The risk of non-payment is lower because financial institutions evaluate the buyer's creditworthiness rather than the seller, making it easier for more businesses to join the financial system.

Impact on financial inclusion



Innovation in practice: AFI respondents highlight the high importance of this innovation for financial inclusion. However, it remains in the early stages of deployment, with 83 percent reporting only moderate usage in their countries.

Implementation status (%)



Importance (%)

Key policy enablers: Legal frameworks for using personal property as collateral in financial transactions, legal restrictions on types of assets accepted as collateral in financial systems, factoring and reverse factoring legal frameworks, centralized online collateral registry, court rulings on the use and seizure of movable assets provided as collateral, regulations for SCF and non-deposit-taking lending

Key market enablers: Vibrant investment communities, alternative data credit scoring, digitized supply chain data, trade financing platforms, e-invoicing systems, financial education

Key driving forces: Financial service providers, governments, trade associations, SMEs, central banks, ministries of finance, ministries of justice, courts

Selected Jurisdictions of Reference: Brazil, China, Fiji, Germany, Turkey

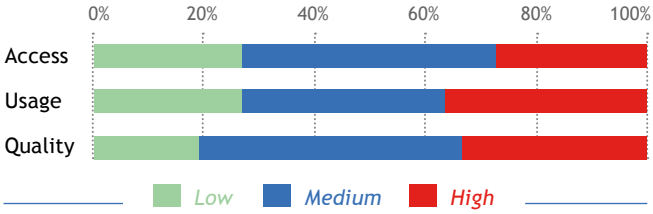
SUPTECH

Supervisory Technology (SupTech) refers to the use of advanced technologies by financial regulators to enhance their supervisory capabilities, using tools that leverage AI, ML, big data analytics, and blockchain to efficiently collect, analyze, and interpret vast amounts of data from financial institutions. By streamlining these processes, it aims to improve regulatory oversight, increase transparency, and ensure compliance with financial regulations.

How the innovation advances financial inclusion:

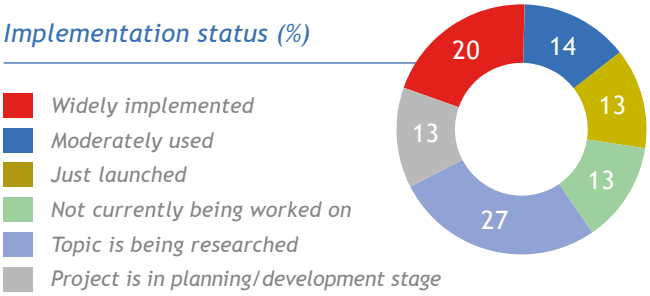
AFI respondents view SupTech as having a mostly moderate impact on financial inclusion, especially in terms of access to financial services. By simplifying regulatory processes, SupTech can lower barriers for FinTech companies and startups, enabling them to reach underserved populations with innovative financial products. Automating compliance and reporting processes reduces operational costs for financial institutions, which can translate into lower fees and improved service offerings for consumers. With advanced monitoring capabilities, regulators can more effectively identify and address fraud, safeguarding consumers and building trust in the financial system. Data analytics provide deeper insights into the needs of different demographic groups, enabling the development of customized financial services specifically for the underserved. Ultimately, a supportive regulatory environment facilitated by SupTech can encourage new technologies and services that further advance financial inclusion.

Impact on financial inclusion

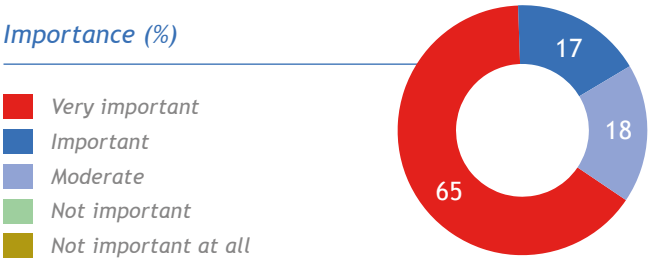


Innovation in practice: AFI respondents highlight the high importance of SupTech for financial inclusion, though it remains in the early stages of deployment, with just over 30 percent reporting wide implementation or moderate usage in their countries.

Implementation status (%)



Importance (%)



Key policy enablers: Strong frameworks to support technology-driven innovation in financial services, data privacy, protection, cybersecurity, open APIs

Key market enablers: Technological infrastructure, ecosystem of FinTech firms, reliable infrastructure (including electricity, communication networks, and standardized data points), e-KYC systems, enhanced data management, advanced data analytics, real-time monitoring systems, artificial intelligence, data visualization platforms

Key driving forces: Governments, central banks, financial regulators, regulatory authorities

Selected Jurisdictions of Reference:
European Union, Ghana, India, Rwanda, Singapore, South Korea

Relevant AFI knowledge products:

Regulatory and supervisory technologies for financial inclusion

Developing an Agent Registry System as a RegTech Tool in the Philippines

Case Study on Bank Supervision Application

TOKENIZATION

Tokenization is the process of exchanging sensitive data for non-sensitive data called “tokens”, which can be used in a database or internal system without exposing the original information.

Although tokens are unrelated values, they often retain certain elements of the original data, commonly length or format, so they can support uninterrupted business operations. The original sensitive data is then securely stored outside the organization’s internal systems. Tokens have virtually no value on their own; they are only useful because they represent something valuable, such as a primary account number for a credit card.

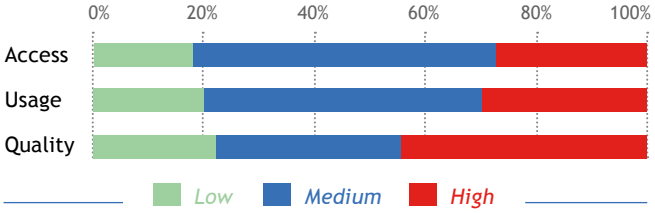
Tokens can be classified as fungible or non-fungible (NFTs, or non-fungible tokens). Fungible tokens represent assets that can be replaced by others of the same type, quality, and quantity, while NFTs generally represent unique assets with characteristics that have no direct equivalent.

How the innovation advances financial inclusion: AFI respondents view tokenization as having a moderate impact on financial inclusion, except for its effect on the quality of financial services.

This innovation makes various asset markets more accessible, integrated, and extremely secure, allowing many new investors to participate.

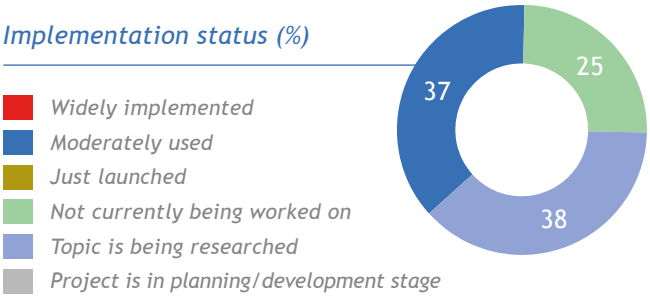
Additionally, the consolidation of asset tokenization tends to drive the emergence of new financial products and services, expand fundraising opportunities (especially for MSMEs), and support greater financial inclusion for unbanked populations.

Impact on financial inclusion

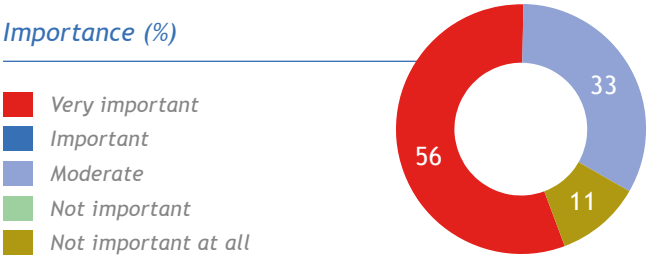


Innovation in practice: AFI respondents highlight the high importance of this innovation for financial inclusion. However, only a third reported moderate use in their jurisdictions, indicating a need for more practical use cases.

Implementation status (%)



Importance (%)



Key policy enablers: Security standards for tokenization, cybersecurity, consumer protection, virtual asset regulation

Key market enablers: Asset tokenization, smart contracts, transparency, security, virtual assets, digital and mobile banking, open source technology, distributed ledger technology

Key driving forces: Market demand, FinTech companies, payment service providers, central banks, securities and exchange commissions

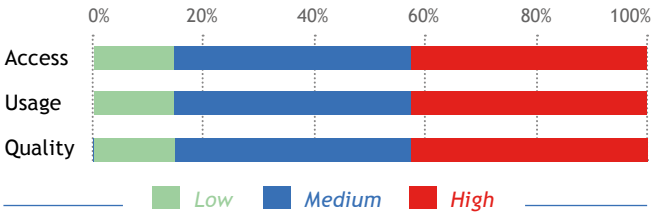
Selected Jurisdictions of Reference: Canada, Indonesia, Luxembourg, Switzerland, United States

VENTURE CAPITAL AND ANGEL INVESTMENTS

Venture capital and angel investors represent innovative financing mechanisms that provide essential funding to startups and small businesses, particularly those lacking access to traditional financial institutions. Venture capital involves investments from specialized firms that pool funds from multiple investors to finance high-potential startups. In contrast, angel investors are affluent individuals who invest personal funds in early-stage companies, often providing not only capital but also mentorship and networking opportunities. This innovation enables a diverse range of entrepreneurs, particularly from underserved communities, to access the capital needed to develop innovative products and services, which are crucial for driving economic growth and financial inclusion.

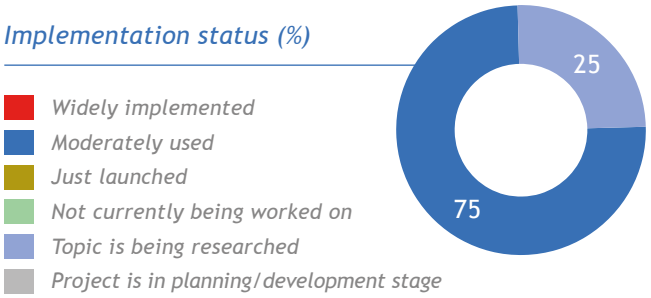
How the innovation advances financial inclusion: AFI respondents consider venture capital and angel investors as having a moderate impact on financial inclusion. These funding sources allow startups, especially those led by women or individuals from disadvantaged backgrounds, to secure financing often denied by traditional financial institutions due to different risk appetites. By investing in startups, venture capitalists and angel investors help advance financial technologies that improve access to banking services, such as mobile wallets and peer-to-peer lending platforms. Such investments also contribute to the growth of startup ecosystems, encouraging knowledge sharing and collaboration among entrepreneurs, which can lead to solutions addressing financial exclusion.

Impact on financial inclusion

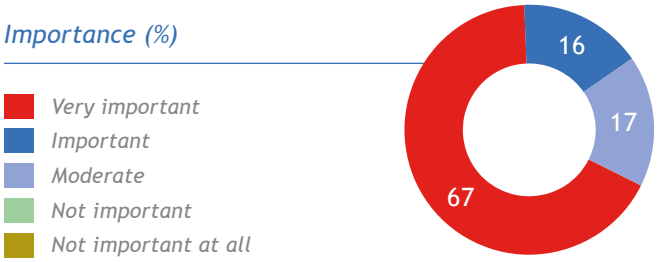


Innovation in practice: AFI respondents highlight the high importance of this innovation for financial inclusion, though it is mostly moderately used in their countries.

Implementation status (%)



Importance (%)



Key policy enablers: Tax incentives, investment regulations

Key market enablers: Networking platforms, crowdfunding infrastructure, digital investment platforms

Key driving forces: Market demand, ministries of finance, ministries of investment

Selected Jurisdictions of Reference: Brazil, European Union, Morocco, United States

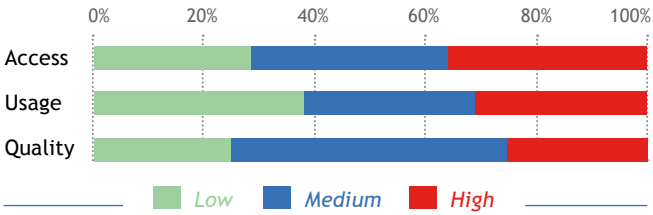
VIRTUAL ASSETS AND CRYPTO ASSETS

Virtual assets, including crypto assets, are digital representations of value that can be traded, transferred, or used for electronic payments. They exist solely in digital form and are managed through digital platforms or wallets and operate on decentralized ledgers like blockchain, which provide transparency, security, and often anonymity. Crypto assets, a subset of virtual assets, use cryptographic techniques on decentralized ledgers to secure transactions and manage the creation of new units. They offer cryptographic security, transparency, and independence from central authorities such as governments or banks. Crypto assets are broadly classified into five types: cryptocurrencies, used as digital currencies and stores of value; utility tokens, serving specific purposes within particular ecosystems; security tokens, resembling traditional securities with ownership rights; stablecoins, which maintain stable values by pegging to external assets; and NFTs, unique digital assets representing ownership of digital items. These categories cover a diverse range of applications across the evolving landscape of digital finance and blockchain technology.

How the innovation advances financial inclusion: AFI respondents generally consider virtual and crypto assets as having a moderate impact on financial inclusion. Virtual assets, like digital tokens and virtual currencies, provide global accessibility through digital platforms, enabling fast and cost-effective transactions, especially cross-border. They enhance security through blockchain technology, ensuring transparency and resistance to fraud.

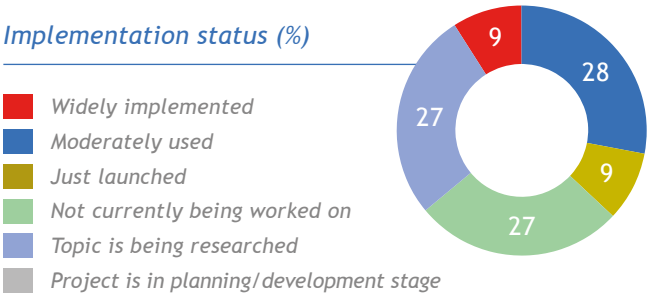
Crypto assets, with their decentralized nature and cryptographic security, offer transparent, immutable transactions independent of central authorities while lowering transaction costs, providing faster transfers, and supporting innovative applications such as DeFi and NFTs.

Impact on financial inclusion

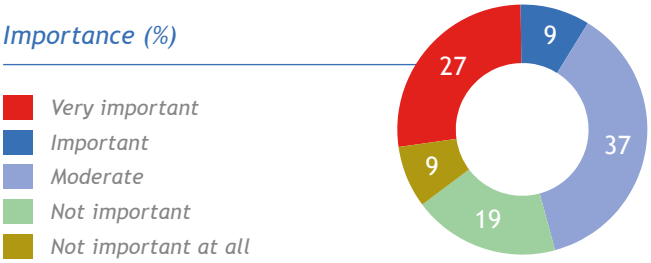


Innovation in practice: Virtual assets and digital assets continue to drive innovation across sectors by offering new economic models, enhancing financial inclusion, and reshaping how value is perceived and exchanged in the digital age. However, AFI respondents remain uncertain about their importance for financial inclusion. The industry still struggles to demonstrate compelling use cases, which is reflected in only nine percent of respondents reporting wide implementation and 28 percent reporting moderate usage.

Implementation status (%)



Importance (%)



Key policy enablers: AML/CFT regulations, special license regimes, virtual asset regulatory frameworks, licensing for exchanges and brokers, stablecoin issuance policies, risk management frameworks for DLT and blockchain, international standards (e.g. FATF guidelines on virtual assets), cybersecurity regulations

Key market enablers: Institutional adoption, market liquidity, blockchain technology advancements, cybersecurity infrastructure, financial and technological literacy, DLT talent and ecosystem, efficient payment rails, high-speed internet, investors and venture capitalists, secure crypto wallets

Key driving forces: Market demand, international virtual asset service providers, central banks, ministries of IT, securities regulatory authorities

Selected Jurisdictions of Reference: Argentina, Austria, Canada, El Salvador, Japan, Singapore, United Kingdom, United States

Relevant AFI knowledge products:

Virtual Assets And Financial Inclusion For Latin America And The Caribbean

ACRONYMS

AFI	Alliance for Financial Inclusion
AML	Anti-Money Laundering
API	Application Programming Interface
BaaS	Banking as a Service
BNPL	Buy Now Pay Later
CBDC	Central Bank Digital Currency
CIC	Community Information Center
CFT	Counter Financing of Terrorism
CRM	Customer Relationship Management
DLT	Distributed Ledger Technology
DFS	Digital Financial Services
e-KYC	Electronic Know Your Customer
EU	European Union
FATF	Financial Action Task Force
FIL	Financial Innovation Laboratory
FinTech	Financial Technology
G2P	Government-to-People
ICT	Information and Communications Technology
IoT	Internet of Things
KYC	Know Your Customer
ML	Machine Learning
MSME	Micro, Small and Medium Enterprises
NLP	Natural Language Processing
POS	Point of Sale
UBI	Usage-Based Insurance
WII	Weather Index Insurance

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