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POLICY BRIEF

PB/07/23

February 2023

THE CENTRE FOR RESEARCH ON FINANCIAL MARKETS AND POLICY®

Fintech and Bank Stability in a Small-Open Economy Context: The Case of Kenya

Executive Summary

The purpose of this policy brief is to explain the role that the fintech (financial technology) ecosystem could play in facilitating financial inclusion in Kenya. The country has witnessed tremendous growth in the fintech subsector in recent years. It had at least 385 registered fintech firms/startups by July 2022 operating in various subspaces such as savings and credit, foreign exchange and cryptocurrency, insurance, and micro/neo-banking. Alongside these developments has been a steep growth in financial inclusion, with FinAccess surveys documenting growth in formal financial services usage between 2006 and 2021 from 33.2% to 85.9% among men, and from 20.5% to 81.7% among women. Therefore, understanding the linkages between fintech and usage of formal financial services is of interest to policymakers. A recent study that sought to explore linkages using FinAccess data for 2016 and 2021, and on which this policy brief is informed, documented several interesting findings. Key amongst these findings are that: (i) the fintech ecosystem facilitates credit evaluation and fosters credit use, offers financial products and services that better match users' needs hence fostering usage of those services, but does not address the distance barrier to financial inclusion; (ii) the probability of an individual enjoying fintech ecosystem services falls by at least 19% if the individual resides in Northern Kenya; (iii) the fintech ecosystem increases the probability of usage of traditional services of financial institutions by at least 5.2%; and (iv) the financial inclusion gains of the fintech ecosystem are not uniform across all user categories with women, urban dwellers, high income earners, more educated individuals, and older adults enjoying its financial inclusion implications more than the rest. Guided by these findings, we recommend several policy actions such as improved provisioning of physical infrastructure in remote areas, fiscal policy incentives, and affirmative action on financial inclusion.

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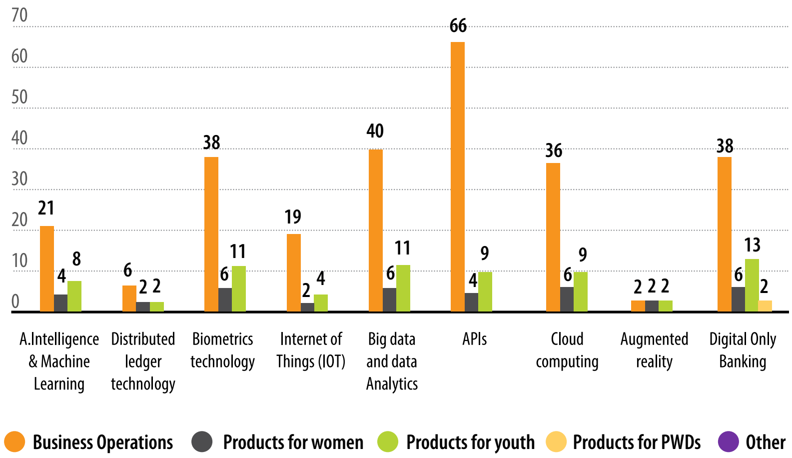
The Centre for Research on Financial Markets and Policy®

The Centre was established by the Kenya Bankers Association in 2012 to offer an array of research, commentary, and dialogue regarding critical policy matters that impact on financial markets in Kenya. The Centre sponsors original research, provides thoughtful commentary, and hosts dialogues and conferences involving scholars and practitioners on key financial market issues. Through these activities, the Centre acts as a platform for intellectual engagement and dialogue between financial market experts, the banking sector and the policy makers in Kenya. It therefore contributes to an informed discussion that influences critical financial market debates and policies.

1. Context and importance

The fintech ecosystem in Kenya has witnessed remarkable growth since the revolutionary m-pesa was launched in 2007. Data from the Central Bank of Kenya show that mobile money transactions increased by 17.5% from KES 3.26 trillion (USD 21.12 billion) to KES 3.8 trillion (USD 31.6 billion) in the first half of 2022. This represents about 32% of the country's gross domestic product (GDP), estimated at KES 12 trillion (USD 99.8 billion) in current money. The country had at least 385 registered fintech firms/startups by July 2022 operating in various fintech subspaces such as savings and credit, foreign exchange and cryptocurrency, insurance, and micro/neo-banking. Additionally, the traditional banking subsector has increasingly incorporated digital technology into its product offerings as shown in **Figure 1**. For example, about 38% and 40% respectively of Kenyan banks use digital only banking and big data and data analytics. Indeed, CBK's 2021 Banking Sector Innovation Survey reports that banks' reliance on analytics (based on data gathered from social media) to understand customer needs and feedback grew by 74% during 2021, replacing exploratory customer interviews, the erstwhile preferred feedback and "intel" channel.

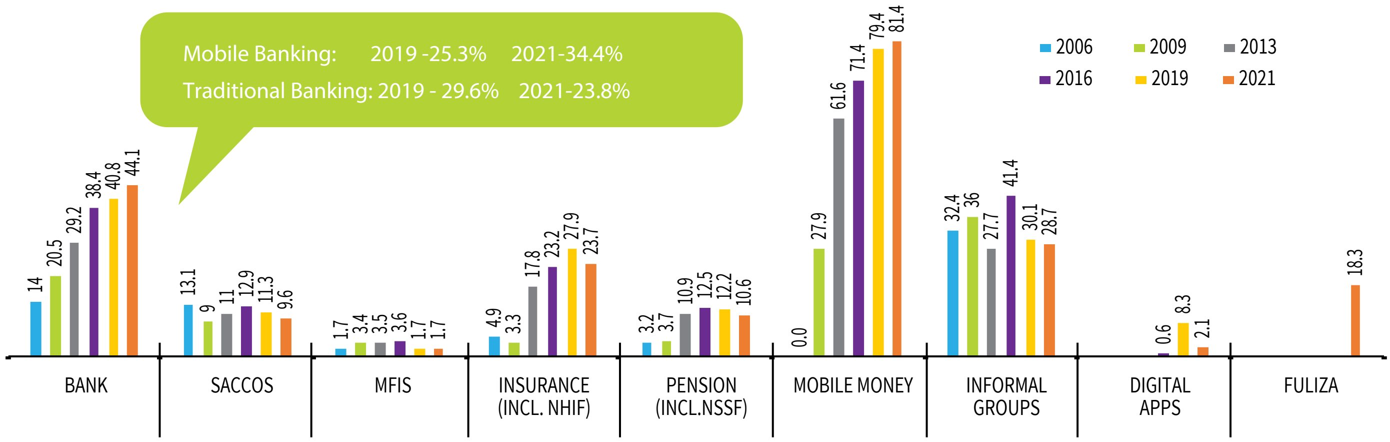
Figure 1: Kenyan banks' utilization of technology in product offerings



Source: Banking Sector Innovation Survey 2021

Alongside these developments, the country has made big strides in financial inclusion with usage of services such as credit growing from about 66.4% of the population in 2016 to about 74.0% in 2021 and savings rising from about 34.2% to 60.8% during the same period. In general, data from the 2021 FinAccess Kenya Household Survey report substantial growth in financial inclusion in the country since 2006, consistent with the growth in the digital ecosystem. As illustrated in **Figure 2**, a close relationship appears to exist between dynamics in the participation in the digital ecosystem and changes in financial inclusion in Kenya. This is in line with the argument that the real opportunity afforded by fintech, in the long term, is that it develops an entire infrastructure for a digital financial ecosystem that underpins financial development, inclusion, stability and integrity.

Figure 2: The changing landscape of financial services, 2006 – 2021

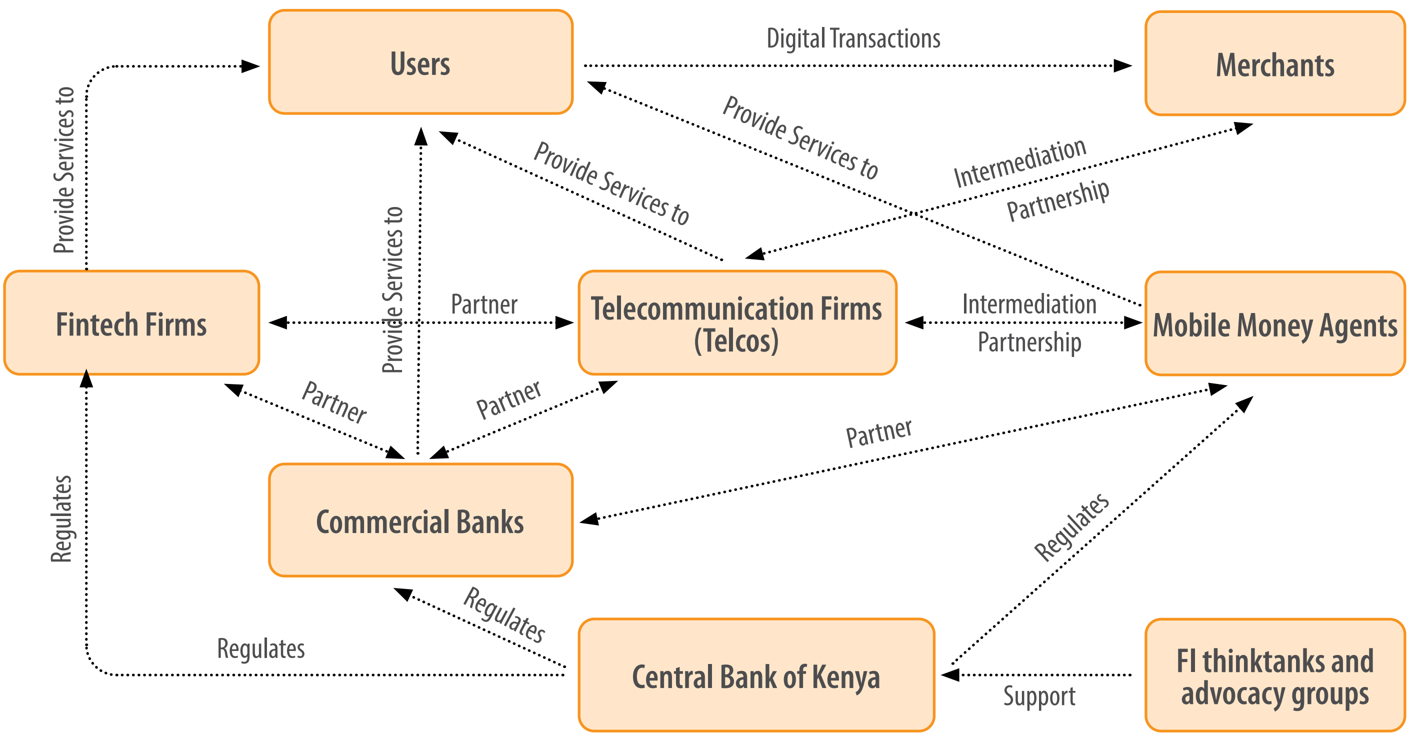


Source: FinAccess Kenya Household Survey, 2021

However, the notion that participation by individuals and households in the digital ecosystem could promote financial inclusion has been criticized on the basis that the fintech ecosystem is driven by private profit motive and hence fails to address the underlying causes of financial exclusion, such as lack of resources and irregular/low income. Existing data appear to bear out this criticism. For example, as of 2022, Safaricom's short-term credit service, Fuliza, charged a minimum daily maintenance fee of KES 18 on transactions between KES 1001 and KES 1500, which translates to approximately 36% monthly interest rate. This is rather too expensive to facilitate lasting welfare improvement, the expected outcome of effective financial inclusion for previously excluded individuals.

Despite these criticisms, recent evidence shows that the digital ecosystem stands a good chance as a catalyst for effective financial inclusion. The fintech ecosystem can be described as a network of relationships (see **Figure 3**). in which various interrelated parties, each pursuing their own objectives, interacts with others through partnerships, regulatory linkages, service provision, intermediation, and advisory in ways that yield results and benefits that are likely superior to those that could be realized by individual players each acting on their own. For example, if each mobile money agent were to develop and use a mobile money platform, the resulting duplication of infrastructure would drive the cost of provisioning of such services beyond the societally optimal levels.

Figure 3: The fintech ecosystems in Kenya



Source: Senyo et al. (2022), adapted

That is, fintech ecosystems enable participants to specialize in the provisioning of services in which they have comparative advantage, which lowers the aggregate cost of provisioning of such services. Thus, conceptually, higher levels of effective financial inclusion should be realized with the presence of a fintech ecosystem than would be attainable under the traditional system of provisioning financial services. For example, commercial banks could provide services directly (through the traditional channels such as banking halls) or by partnering with telcos to use mobile service platforms, with the partnership fostering access to remote locations and lowering costs of service provision (e.g., eliminates the need for direct investment in bricks and mortar or renting of space). The wider reach enabled by mobile provisioning means that more people, including those hitherto unbanked, can access financial services, whilst the lower costs of service provision could foster effective utilization of such services (e.g., for loan applications, transactions and savings).

2. Methods and results

Using a battery of scientific procedures that go beyond the anecdotal observations highlighted in Section 1, a study that informs this Policy Brief recently analyzed data obtained from the 2016 and 2021 FinAccess Kenya Household Financial Inclusion Surveys. The data covered over 8500 randomly chosen households in 2016 and over 7000 households in 2021. The study sought to establish the role of the fintech ecosystem on effective financial inclusion in Kenya. The study also explored the specific mechanisms through which the fintech ecosystem may influence effective financial inclusion. The study documented several findings of interest to policymakers.

- First, fintech services, by leaving a record of usage, provides a history of financial transactions of clients thereby facilitating their (clients') evaluation, hence fostering credit access to individuals who would ordinarily be denied access due to lack of financial history.
- Second, the probability of an individual enjoying services available in the fintech ecosystem falls by at least 19% if the individual resides in Northern Kenya, where the fintech infrastructure is relatively underdeveloped.
- Third, the fintech ecosystem increases the probability of usage of products/services of traditional financial institutions by at least 5.2 percentage points after controlling for various individual-level factors and after controlling for locational factors typically associated with access and usage of financial services and products.
- Fourth, the fintech ecosystem plays an important role in capacitating women, improving their ability to access and use formal credit services. This is important in a country where a large number of women, and women-owned enterprises, due to inadequate or lack of access to formal financial institutions, depend largely on informal services such as "table banking" to meet their financing needs.
- Fifth, the evidence strongly supports the view that the fintech ecosystem has further alienated traditionally marginalized groups such as lower income individuals, rural inhabitants, less educated individuals, and young adults (people aged below 35 years).

3. Policy recommendations

Several policy implications can be drawn from our findings. First, the distance bottleneck in the access and use of financial services needs special attention. In remote areas that are poorly served by electricity, the distance to the nearest mobile money agent may be as much of a hinderance to transactions as the distance to the nearest bank. There is the possibility (though not investigated in the paper that informs this policy brief) that provisioning physical infrastructure may help address this barrier. For example, mobile money agents naturally prefer locations with electricity for them to charge their phones. Thus, provisioning electricity may help address the issue of access in such locations.

Secondly, "savings in financial institutions" does not appear to respond as well to the fintech intervention as the other uses of financial services. This could mean either that the level of savings in Kenya is generally low to the extent that such interventions may not effectively address it, or that fiscal policy interventions (e.g. greater tax reliefs) may need to be strengthened to work alongside the fintech sector in incentivizing savings, or that mobile savings (the likes of M-Shwari) are crowding out traditional financial institutions savings in which case regulations should explore ways of enhancing it to maximize welfare gains.

Third, targeted interventions may be required to make digital financial inclusion attractive to the traditionally marginalized populations (e.g., affirmative action for low-income earners). This should be in response to the finding that the fintech ecosystem, despite empowering women, has largely benefitted traditionally favored demographics such as the upper income group, more educated individuals, and individuals aged above 34 years.

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