Regulation and Innovation: The Experience of Regulating Kenya's M-Pesa

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I. What is M-Pesa? How has it Evolved

- M-Pesa is an electronic money transfer product that enables users to store value in their mobile phone or mobile account in the form of electronic currency that can be used for multiple purposes including transfers to other users, payments for goods and services, and conversion to and from cash
- It has evolved into a platform of financial services to provide a retail electronic payments platform, virtual savings accounts and virtual credit.
- This technological platform has allowed Kenyans to access a menu of financial services in the comfort of their homes, work places or locations they choose, without a trip to the bank.
- It is an important instrument for financial inclusion and digitization in Kenya.

II. The M-Pesa Idea and Regulating M-Pesa

- The initial idea way back in 2001 - Kenyans were using prepaid airtime to settle debt and transactions
- Microsave wanted to use this idea to help a MFI in micro loan repayments: A research project – use prepaid airtime for loan repayments - Safaricom agents to be aggregators of pre-paid airtime into loan repayments' accounts
- Communication Bill(2006) amendments – recognized electronic units of money –the direction of the project changed
- Safaricom network of agents became POS/CICO – to change cash into electronic units of money and load it into a SIM card and vice versa, at par value.
- The mobile phone number was the transactions account – But some challenges to overcome:
  1. No NPS Law: CBK invoked the Trust Law - developed a Trust Account owned by Trustees; Guidelines on the Trust Account
  2. Telco Agents' role – change cash into electronic units of money store into the SIM card and would simultaneously be stored in a Trust account – The Transactions platform – Rules and regulations for residual balances and role of Trustees
  3. Risk Mitigation and thresholds for transactions and maximum holding in the phone account
  4. Telco agents and the emerging ecosystem - Unit costs and negotiations/persuasions
  5. How to regulate Telco agents and the emerging Agency Network Management – MOU with Telcos' Regulator
- From M-Pesa to M-Shwari - Virtual Savings accounts and Short term credit in banks – the comfortable end

III. The Novelty of Regulating M-Pesa

- M-Pesa as a product and a transactions platform and Telcos providing the transmission backbone – a collaboration with two regulators, the CBK and Communications Authority, CA.
- At the time, no National Payments and System, NPS, law and Communication Authority had no jurisdiction on financial transactions
- The CBK adopted the "Test and learn" approach – not to stifle innovations in the market
- The CBK invoked the Trust law, a trust account was developed in the target bank to be the transactions platform
- The CBK developed ***draft*** National Payments system guidelines to regulate the emerging retail electronic payments system
- The CBK and CA imposed a registration of SIM card for those entering into M-Pesa ecosystem
- The CBK Revised the Mobile Phone based KYC – to a tiered system with clear thresholds of transactions.
- The CBK enhanced the Credit information sharing – so that the emerging virtual savings accounts products can utilize data on transactions and savings to generate individual credit scores to price short term credit.
- The CBK and Safaricom shared responsibilities in developing regulations for the Agent Network.

IV. The Agents' Network Management

- M-Pesa started with direct agents for money transfers and pre-paid airtime distribution
- The role of an Agent in a Point of Service, POS, was simple – Change cash into electronic units of money and store into the SIM card and vice versa. Then the funds would simultaneously be loaded into the Trust Account in the bank.
- The evolution facilitated the formation of a specialised agents' model with specific responsibilities:
  - **Agents** or **Sub-Agents** who formed the lower end of POS or CICO - Cash in Cash out platform
  - **Master Agents** (**Aggregators**) - responsible for supervising Agents in a given locality and providing them with liquidity.
  - **Super Agents –** Large volume transactions, interoperable across networks and liquidity distribution to master agents
- In the emerging literature, this is the **Master Agent Model**, that is considered as the Global Best Practice in Agent Network Management once the market has evolved (see www.microsave.ne).

V. Risk Mitigation

- The risk mitigation and confidence boosting in the market was necessary.
- The risks and perceived risks for rolling out M-Pesa were paraded - to show that this financial product would work and was appropriate in Kenya’s financial market.
- The risks in M-Pesa money transfer service were in many ways like those related to payments systems worldwide, but lack of NPS law complicated the terrain.
- What risks? **Credit Risk; Liquidity risk; Operational risk; Settlement Risk; Legal risk and Systemically important Risks**
- **The Anti-Money Laundering (AML) and Combating Financing of Terrorism (CFT)** – at the time Kenya was in the Dark-Grey List in FATF classification
- The CBK laid the ground for mitigating each of the risk categories.

VI. M-Pesa Evolution and Development

- M-Pesa has evolved from the initial idea to become a technological platform for a menu of financial services and an agent of digitization in Kenya:
  - **First Stage** – **Retail Electronic Payments**: Technological platform for money transfers, payments and settlement – Trust accounts in specific banks that developed into transactions platforms supported by a network of Telco Agents. Telco formed the transmission backbone to a Trust Account in the commercial banks
    - Other commercial banks, MFIs and SACCOs were integrated with this platform.
  - **Second Stage** – Development of **Virtual Savings Accounts in banks**: **Virtual Savings Platform** – has become a technological platform to manage micro accounts by banks and raise financial inclusion profile in Kenya.
  - **Third Stage**: - **A platform of virtual credit supply** -Transactions and savings data used to generate credit scores for use as the basis to evaluate and price short-term micro credit.
    - Changing and transforming the costly collateral technology that forms the major obstacle in the credit market development, especially in Africa.
  - **Fourth Stage:** Developments in cross-border payments and international remittances.

VII. The Celebrated Outcomes

- **An Electronic Retail Payments System has evolved** – it is effective, efficient, transparent and safe.
- **Financial inclusion has improved** and there is evidence of inclusive finance and poverty reduction
  - Women can save in instruments that cannot be encroached
- From Digital Financial Services, DFS, to Digitization in the economy – Has allowed FinTechs to roll out **sustainable business models** across sectors of the economy
- Digitization is influencing tax payments designs and revenue administration to minimize leakages.
- Government has joined the electronic payments platform: -The e-government services is the key word in Kenya – the services are effective and easy to reach, as well as for Government to design targeted social protection programs.

VIII. Consolidation the Future

- **Connectivity** – Both for mobile phones and internet: Fibre Optic network in Kenya – Scalability of digitization is important for sustainability.
- **Interoperability -** market conduct and competition are challenges that require feasible solutions – Kenya at present has a unique market structure – not dominance or monopoly setting
- **Electronic-ID system** to cope with market innovations and security
- **State and institutional capacity** to cope with market innovations and dynamism – *for example short term virtual credit can be abused!!*
- **Transformative regulatory technology** or better regulation that does not stifle innovation and dynamic development in the market place – *[see Njuguna Ndung'u (2017); **Boosting Transformational Technology:** Creating supportive environments for game-changing innovations; Brookings Foresight for Africa 2017; https://www.brookings.edu/multi-chapter-report/foresight-africa/]*