Central Bank of Kenya

Central Bank of Kenya Banking Sector Innovation Survey 2019

CENTRAL BANK OF KENYA BANKING SECTOR INNOVATION SURVEY 2019

1.0 Background

1.1 Innovation Survey

- Over the years, Kenya has positioned itself as an emblem of Financial technologies (FinTech) aimed at driving financial innovations within the financial sector.
- These technologies are increasingly redefining the delivery of financial services as well as improving consumer-experience and driving consumer expectations for financial products and services.
- The 2019 Innovation Survey as carried out by the Central Bank of Kenya (CBK) was aimed at collecting present and forward-looking information on FinTech developments in the Kenyan financial sector as at December 31, 2019.
- This serves as a follow-up to the initial survey that was carried out in 2019 covering the period January 1, 2015 to December 31, 2018.
- The information collected will be paramount in enabling the CBK to better understand the impact of FinTech on current operating models, including the emergence of new business models and the evolving and emerging risks.
- Furthermore, the insight from the survey shall provide CBK with an informed basis in line with CBK's agenda for evidence-based public policy in the financial sector.

1.2 Survey Methodology

- The survey collected data on the state of innovation as at December 31, 2019 from 35 commercial banks and 7 Micro Finance Banks (MFBs). The survey questions were classified into 4 sections:
    - Section A involved questions related to institution innovation activities;
    - Section B built on the context for innovation;
    - Section C sought feedback on public support for innovation; and
    - Section D was an assessment of the inaugural Afro-Asia Fintech Festival (AAFF) 2019.

1.3 Innovation Developments in the Banking Sector

- The adoption of FinTech in the Kenyan banking industry in the recent years has been targeted at redefining the delivery of financial services as well as improving consumer experience and driving consumer expectations for financial products and services.
- As per the survey, 80 percent of the institutions in the Kenyan banking sector introduced a product that leverages technology between the survey period January 1, 2019 to December 31, 2019.
- Additionally, 71 percent of the banks are utilizing market knowledge and FinTech investment since their innovation business strategies are aimed at improving their banking services and products offering.
- Strategically, 14 percent of Kenyan banks consider themselves as "New Banks" since they apply advanced FinTech to provide banking services, minimize operational costs, improve customer experience, and market their products through social media.

1.4 Summary of Findings

- 80 percent of the banks and 86 percent of Micro-Finance Banks (MFBs) introduced a new FinTech product between January 1, 2019 and December 31, 2019.
- 71 percent of banks classified their innovation business strategies as aimed at being a "better bank" that leverages market knowledge and FinTech investment as a means of improving banking services and products offering.
- 86 percent of the institutions classified their innovation business strategies as aimed at being a "better bank" that leverages market knowledge and FinTech investment as a means of improving banking services and products offering.
- For banks, payments-related services had the highest number of products with 49 percent while credit, deposit and capital raising services had 43 percent.
- For MFBs, credit, deposit and capital raising services had the highest number of products with 57 percent while payments-related services had 29 percent.
- With regard to consumer focus, banks perceive improved and tailored banking services as a greater opportunity with 54 percent compared to lower transaction costs and financial inclusion.
- MFBs regard financial inclusion as a greater opportunity with 71 percent compared to lower transaction costs and improved and tailored banking services.
- From an institutional perspective, customer acquisition was ranked as the most important factor when considering opportunities with 45 percent for banks and 41 percent for MFBs.
- The top 3 methods through which financial institutions obtain feedback from customers include customer surveys (25 percent), exploratory customer interviews (21 percent) and social media and email (18 percent).
- Key problems that banks have indicated to be solving through FinTech include:
  - Affordability of services and products
  - Financial inclusion
  - Operational efficiency
  - Cost management
  - Customer Acquisition
  - Diversity in revenue generation
  - Risk mitigation
  - Compliance
- The top three areas, whose developments are considered important include: Application Programming Interfaces (APIs), Big Data and Data Analytics, and Cloud Computing.
- According to the survey, 74 percent of the banks incurred financial resources on employee training. 43 percent spent less than Ksh.5 million, 23 percent spent between Ksh.5 million and Ksh.50 million while only 3 percent spent between Ksh.100 million and Ksh.200 million.
- The top 3 Sustainable Development Goals (SDGs) with the most potential for innovation-related activities tied to digitalization of finance were SDG 8: Decent Work and Economic Growth (74 percent), SDG 9: Industry, Innovation and Infrastructure (66 percent) and SGD 1: End poverty in all its form everywhere (51 percent).
- Top public policy suggestions to CBK by the institutions include:
  - Amendment of regulatory framework such as the Risk Management Guidelines

(RMG) to encompass emerging innovation products, practices and providers.

- Guidelines and policy around new payment systems and channels, cloud computing, data protection.
- Regulation of systemically important technology providers to financial institutions.
- The need for an innovation support centre within the CBK.
- Implementation of infrastructure to support digital identity.

- 77 percent of banks attended the inaugural Afro-Asia FinTech Festival (AAFF) 2019 while only 14 percent of Micro-Finance Banks (MFBs) attended.
- Institutions recommended that the next AAFF incorporate the following topics:
    - Case studies on Electronic Know Your Client (E-KYC) solutions.
    - Handling identity theft within banking solutions.
    - Open banking.
    - The role of sandboxes in bank and FinTech regulation
    - Digital Banking.
    - Central Bank Digital Currencies (CBDC).
    - Islamic banking advancements.

1.5 Changes from the previous 2018 survey

- CBK conducted its inaugural innovation survey that covered the period January 1, 2015 to December 31, 2018.
- The 2018 survey included 35 commercial banks while the 2019 survey includes 35 commercial banks and 7 Micro Finance Banks (MFBs). This implies that the 2019 survey offers a broader insight across the tiers of the banking sector.
- In the 2018 survey, improved and tailored banking services reflected a higher response rate of 77 percent compared to the 54 percent response of 2019. While financial institutions are focused on customer centricity, the results suggest an increased focus as well on managing costs as well as facilitating financial inclusion in Kenya through the banking sector.
- In terms of innovation and management expenditure, the 2019 survey saw an increased allocation of funds across institutions. As technology keeps morphing, its application in the financial sector is quintessential hence requiring the necessary investment.
- In the previous survey, the priority of order SDG priorities was: SDG 9: Industry, Innovation and Infrastructure (86 percent), SDG 8: Decent Work and Economic Growth (69 percent) and SGD 3: Good Health and Wellbeing (49 percent). However, in the 2019 survey, the top 3 Sustainable Development Goals (SDGs) with the most potential for innovation-related activities tied to digitalization of finance were SDG 8: Decent Work and Economic Growth (74 percent), SDG 9: Industry, Innovation and Infrastructure (66 percent) and SGD 1: End poverty in all its form everywhere (51 percent).
- 80 percent of the banks and 86 percent of MFBs introduced a new FinTech product in the 2019 survey. This is a slight decline from the 2018 Innovation Survey whereby 94 percent of the financial institutions introduced a product. However, this is directly attributed to the fact that the 2018 survey covered a longer period and that institutions that developed are likely testing or gauging the impact of their products.
- CBK also sought feedback on the Afro-Asia Fintech Festival (AAFF2019) from the banking sector with the view of capturing the macro suggestions on topics to include and how to improve the impact of the festival.

2.0 Survey Findings

2.1 Institutions Innovation Activities

2.1.1 Business Strategy and Practices Towards Financial Innovation

- From a business strategy perspective, 71 percent of the banks consider themselves as a “better bank”, 14 percent as a “distributed bank” and 14 percent as a “new bank”.
- From a Micro-Finance Bank (MFB) perspective, 86 percent of MFBs consider themselves as a ‘better bank” while 14 percent of MFBs as a ‘new bank”.
- In the 2018 Innovation Survey that covered the period January 2015 to December 2018, 17 percent of respondents considered themselves as “distributed banks”. However, in the 2019 Innovation Survey, 14 percent of the financial institutions categorized itself as a “distributed bank”.
- Therefore, majority of the institutions are leveraging on market knowledge and FinTech investment in order to improve their banking services and products offering.
- While “distributed banks” leverage collaborations and partnerships with FinTech start-ups, the “new banks” apply advanced FinTech to provide banking services, minimize operational costs, improve customer experience, and market their products through social media.
- The tables below present the institutions’ business strategy towards financial innovation.

Figure 1: Banks’ Business strategy on financial innovation (Annex 1 defines the terms in the glossary)

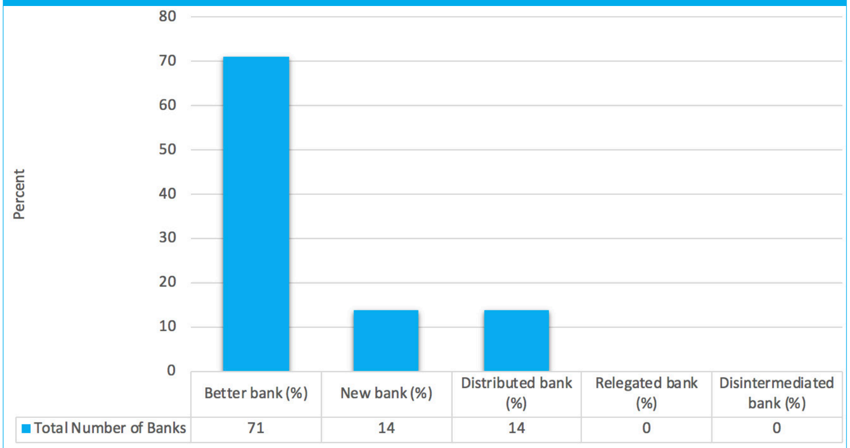


Figure 2: Business Strategy Comparison between 2018 and 2019 Survey

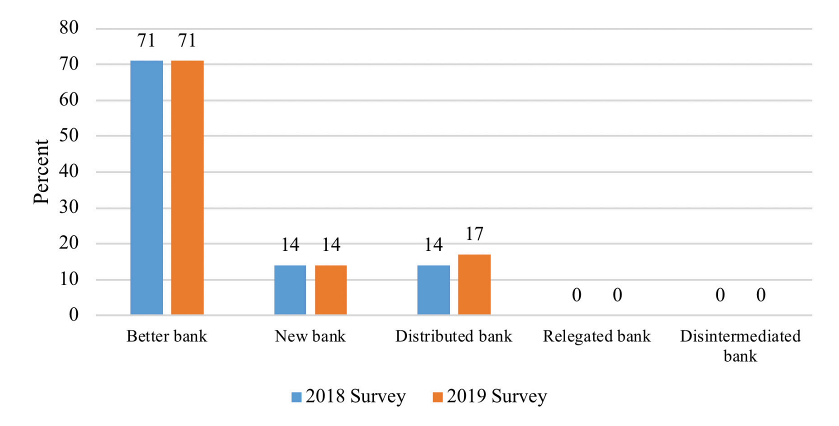
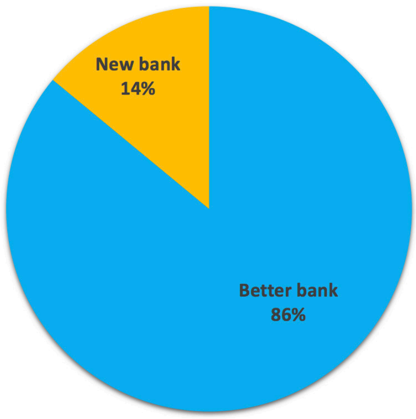


Figure 3: MFBs' Business strategy on financial innovation (Annex 1 defines the terms in the glossary)



2.1.2 Product Innovation

- 80 percent of the banks and 86 percent of MFBs introduced a new FinTech product between January 1, 2019 and December 31, 2019. This is a slight decline from the 2018 Innovation Survey whereby 94 percent of the financial institutions introduced a product.
- In this survey, the functional scope of product classification was grouped into 5 areas:
    - Credit, deposit and capital raising services;
    - Payments;
    - Clearing and settlement services; Investment management and custodial services;
    - Incidental business activities; and
    - Market support services.
- For banks, payments-related services had the highest number of products with 49 percent while Credit, deposit and capital raising services had 43 percent.
- For MFBs, Credit, deposit and capital raising services had the highest number of products with 57 percent while payments-related services had 29 percent.
- In the previous Innovation Survey of 2018, Payments-related services had the highest number of products with 77 percent.
- The Figures below highlight the percentage of institutions that have developed products within the aforementioned areas.

Figure 4: Introduction of FinTech Products by MFBs

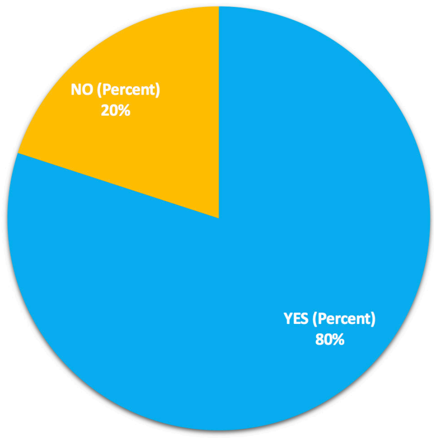


Figure 5: Introduction of FinTech Products by Banks

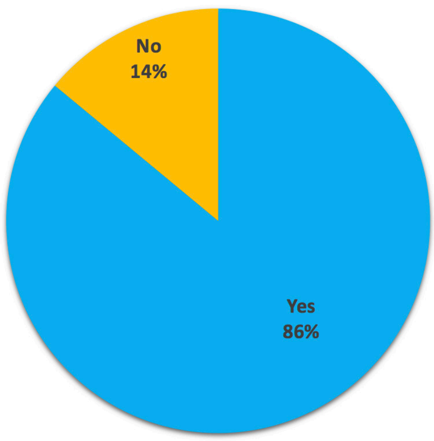


Figure 6: Classification of FinTech Products Introduced by Banks

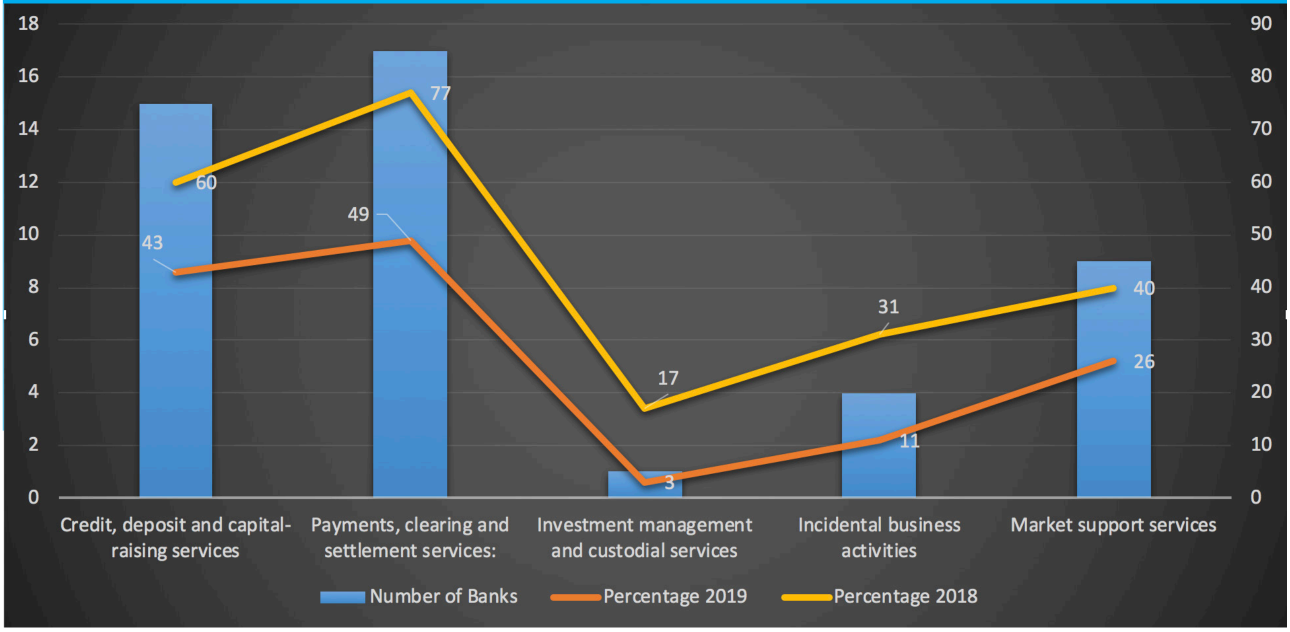
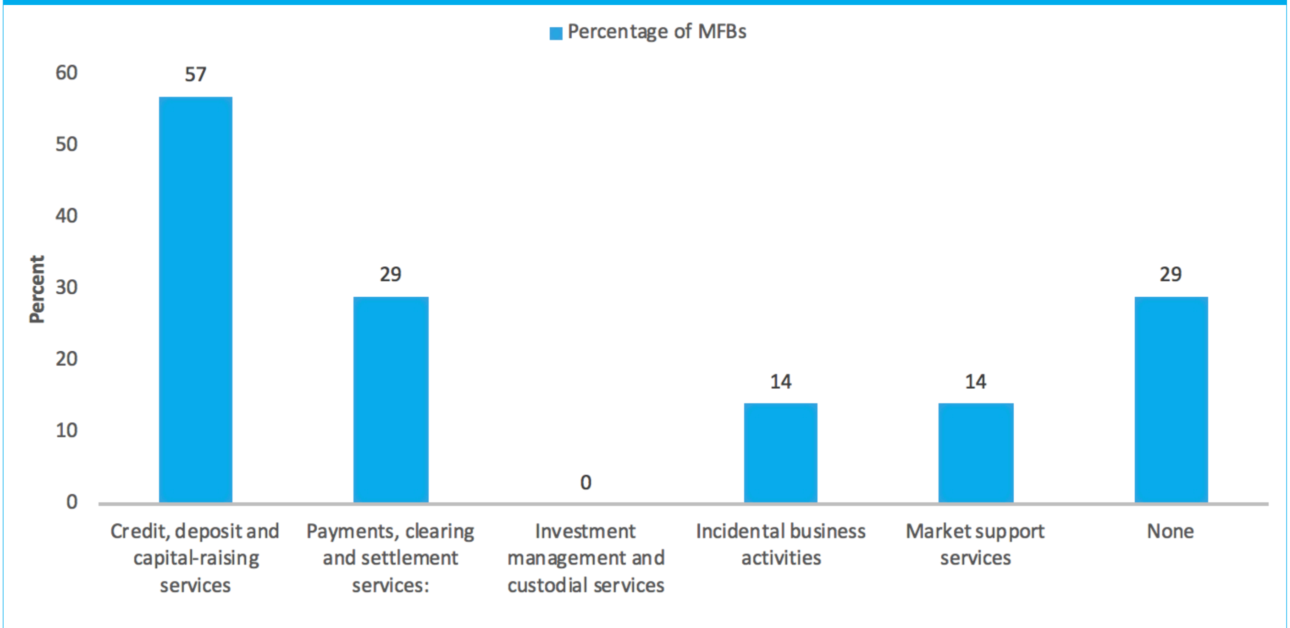


Figure 7: Classification of FinTech Products Introduced by MFBs



2.1.3 Evaluation of Product Innovation Benefits

- From a market-based economy perspective, institutions have varied incentives for pursuing product innovation.
- With regard to consumer focus, banks perceive improved and tailored banking services as a greater opportunity with 54 percent compared to lower transaction costs and financial inclusion.
- In the 2018 Innovation Survey, improved and tailored banking services reflected a higher response rate of 77 percent compared to the 54 percent response of 2019.
- MFBs regard financial inclusion as a greater opportunity with 71 percent compared to lower transaction costs and improved and tailored banking services.
- From an institutional perspective, customer acquisition was ranked as the most important factor when considering opportunities with 45 percent for banks and 41 percent for MFBs.
- Notably, enhanced compliance was ranked as the least important.
- The figures below illustrate the rankings of the three opportunities.

Figure 8: Banks: Ranking of importance of opportunities when evaluation the benefits of a product to customers

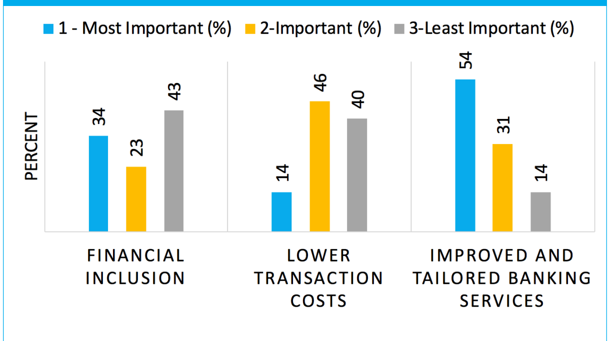


Figure 9: 2018 Innovation Survey, Ranking of importance of opportunities when evaluation the benefits of a product to customers

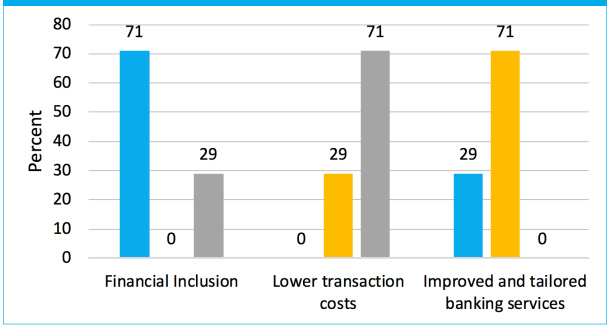


Figure 10: Banks: Ranking of importance of opportunities when evaluation the benefits of a product to institutions

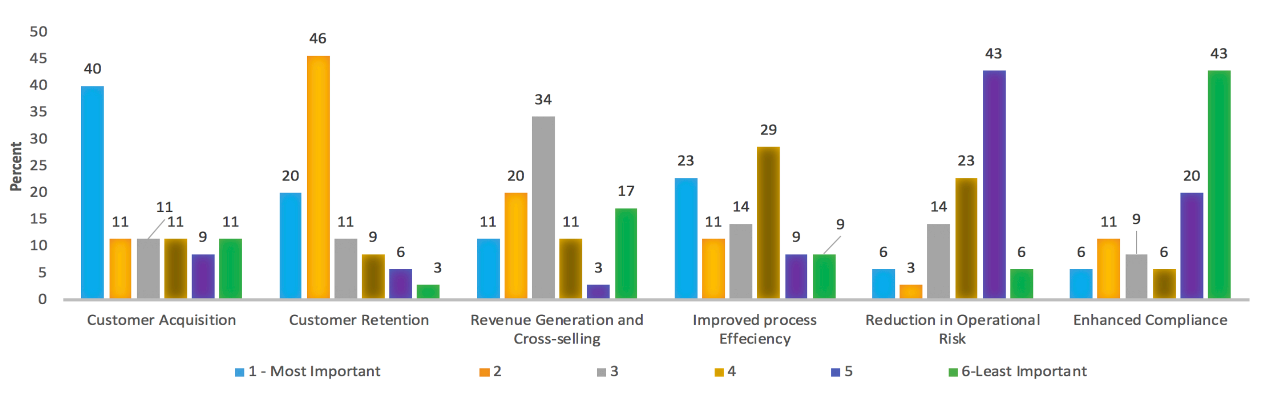


Figure 11: MFBs: Ranking of importance of opportunities when evaluation the benefits of a product to customers

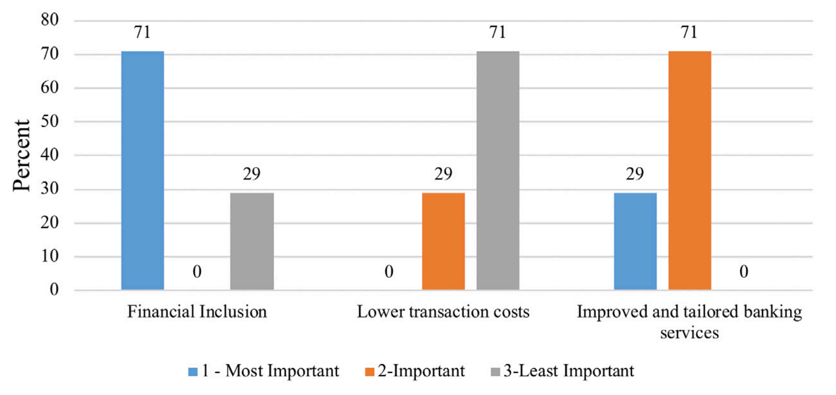


Figure 12: MFBs: Ranking of importance of opportunities when evaluation the benefits of a product to institutions

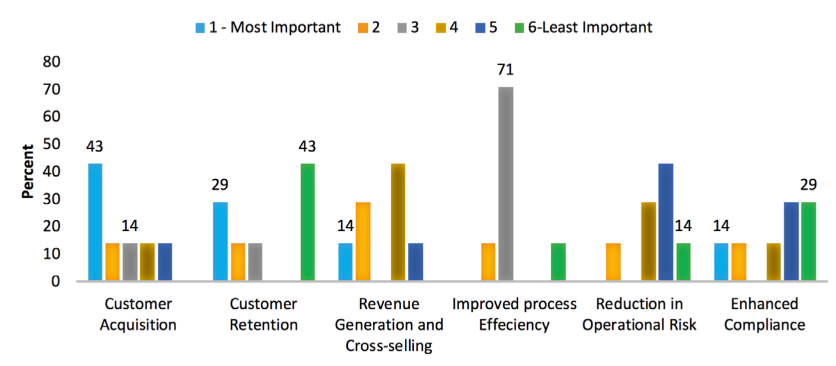
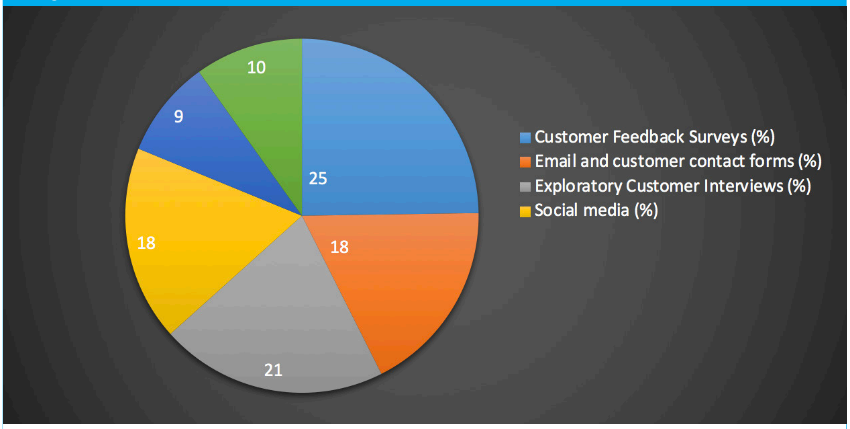


Figure 13: Customer Feedback Methods



2.1.4 Innovation Agenda

- Financial institutions involve customer feedback in their decision rationale while formulating and developing products.
- The top 3 methods through which financial institutions obtain feedback from customers include:
  - Customer Surveys (25 percent)
  - Exploratory Customer Interviews (21 percent)
  - Social media and Email (18 percent)
- Key problems that banks have indicated to be solving through FinTech include:
  - Affordability of services and products
  - Financial inclusion
  - Operational efficiency
  - Cost management
  - Customer Acquisition
  - Diversity in revenue generation
  - Risk mitigation
  - Compliance
- The figures below highlight the customer feedback methods and the problems that financial institutions are focused on solving.

Figure 14: Problems that FIs are trying to solve

- Figure 14 above, represents a textual analysis of the innovation agenda items for the financial institutions. According to the findings from the survey, the key focus areas are:
  - Cost reduction
  - Improving the customer experience
  - Financial inclusion
  - Diversification of revenue streams

2.1.5 Innovation Related Risks

- Cyber risk, third-party management and operational risk were considered the top three innovation related risks to banks both in the current 2019 Innovation Survey and the previous 2018 Survey.
- For MFBs, strategic, operational and cyber risks were considered the top three innovation related risks.
- Liquidity risk was ranked as the least by the banks while third party vendor management was ranked as the least by MFBs.
- The charts below present the priorities of innovation related risks to the institutions.

Figure 16: Innovation Related Risks For MFBs

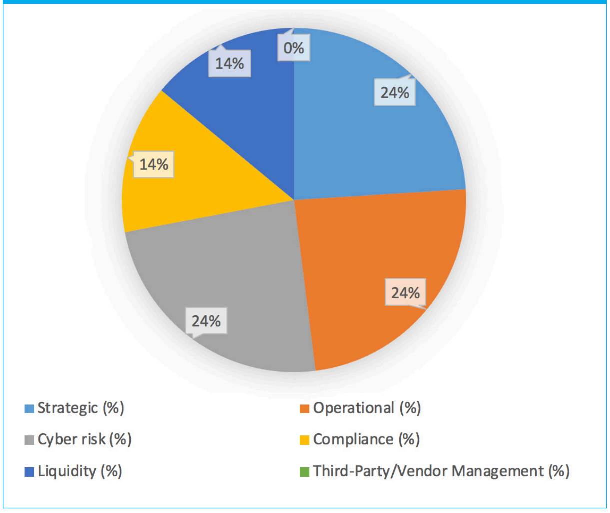


Figure 15: Innovation Related Risks For Banks

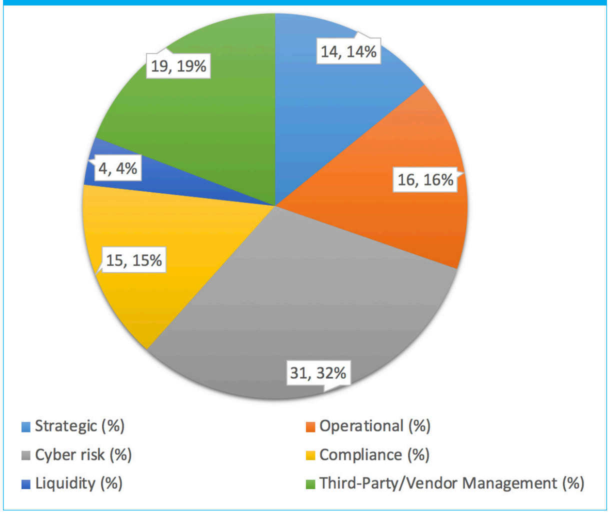
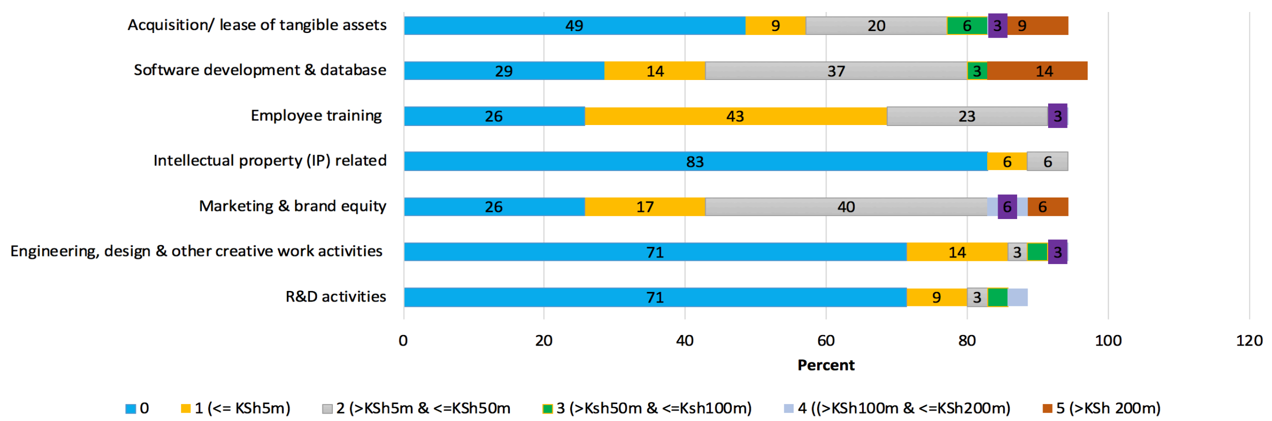


Figure 17: Level of Importance in Developments in the Sector



2.2 Innovation Context

2.2.1 Innovation and Management Expenditure

- Innovation requires significant expenditure in order to carry out activities such as research and development (R&D), software development and employee training.
- 14 percent of FIs spent more than Ksh.200 million on software development and database related activities while 40 percent of FIs spent between Ksh.5 million and Ksh.50 million on marketing and branding activities of technology-related products.
- An integral element in product development and usage is the element of people. According to the survey: 43 percent of the institutions spent less than Ksh.5 million, 23 percent spent between Ksh.5 million and Ksh.50 million while only 3 percent spent between Ksh.100 million and Ksh.200 million.
- Despite the fact that innovation requires significant investment on research and development (R&D), only 29 percent of the FIs reported having incurred expenses on R&D in 2019.
- Figure below presents the distribution of expenditure for the various activities in 2019 only.

Figure 18: Factors Impacting the ability and willingness of institutions to innovate for Banks

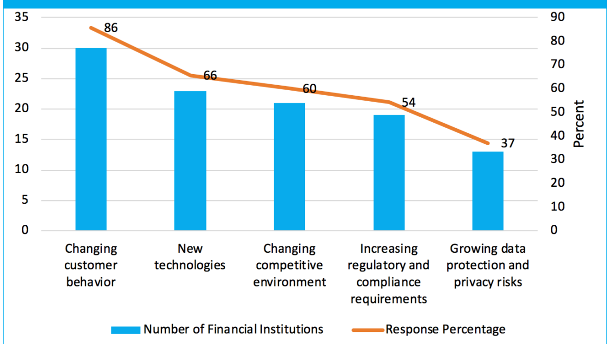
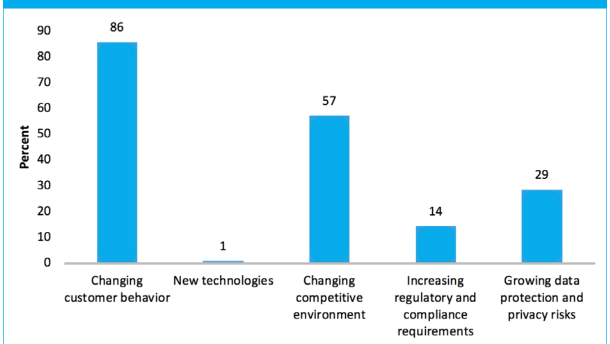


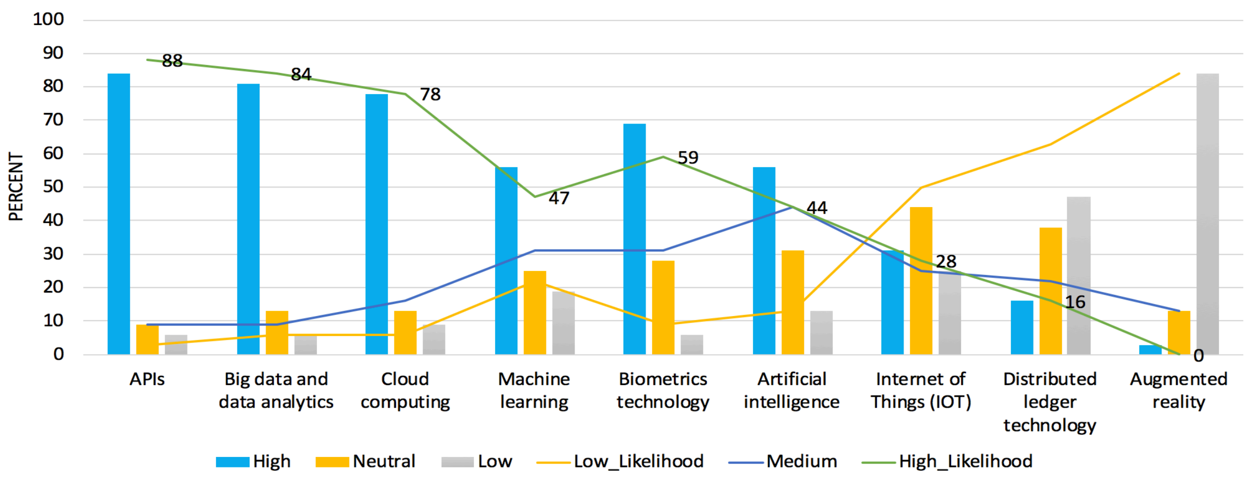
Figure 19: Factors Impacting the ability and willingness of institutions to innovate for MFBs



2.2.2 Factors with Biggest Impact On Institution's Ability and Willingness to Innovate Ahead

- Banks identified that changing customer behaviour had the highest likelihood at 86 percent to determine their ability and willingness to innovate going forward.
- MFBs identified that both changing customer behaviour and new technologies had the highest likelihood at 86 percent to determine their ability and willingness to innovate going forward.
- For banks only 37 percent were concerned with growing data and privacy risks while for MFBs, increasing regulatory and compliance requirements had the lowest likelihood at 14 percent.
- The figures below present the share of proportion of factors impacting innovation ability and willingness of institutions.

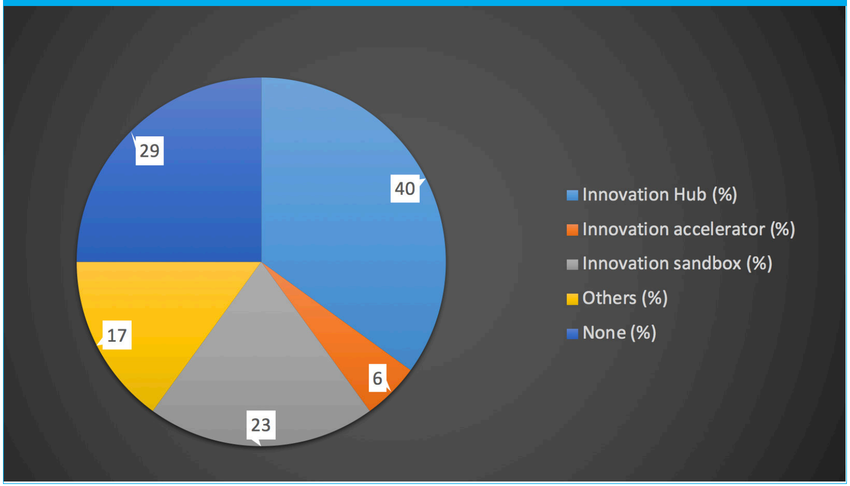
Figure 20: Importance of developments compared against likelihood of undertaking activities



2.2.3 Importance of Developments and Likelihood of Your Institution Undertaking Innovation Activities

- The top three areas whose developments are considered important include: Application Programming Interfaces (APIs), Big Data and Data Analytics, and Cloud Computing.
- The top three areas result is in agreement with the previous survey of 2018.
- Notably, banks indicated low likelihood, at 16 percent, of developments in Distributed Ledger Technology (DLT) being undertaken.
- The figures below indicate the trends in importance and likelihood of undertaking innovation activities in the sector.

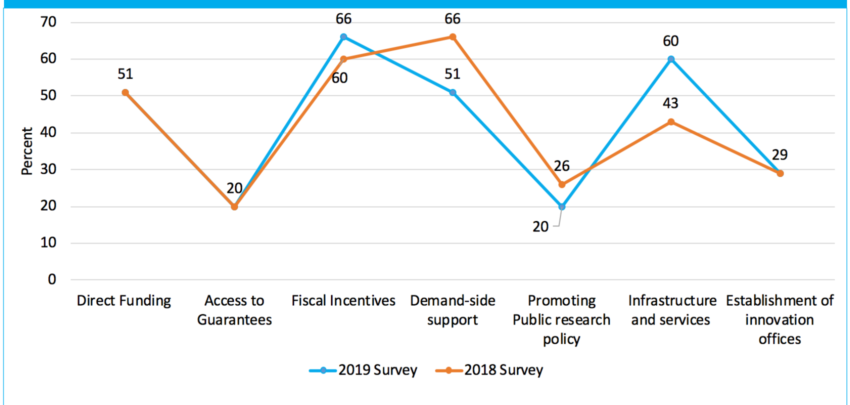
Figure 21: Initiatives to Facilitate innovation activities



2.2.4 Initiatives That Have Been Put in Place to Facilitate Innovation Activities

- 40 percent of the institutions reported that they use innovation hubs to facilitate innovation activities within as well as to improve interactions with FinTech players.
- 23 percent of the institutions reported having established sandboxes while 29 percent indicated having not put in place any particular initiatives.
- 17 percent of the institutions indicated that they use alternative approaches such as partnering with FinTechs or leveraging innovation teams of the parent company.
- Chart below presents the distribution of initiatives by institutions.

Figure 22:Efficacy of Public Support and efficacy considerations

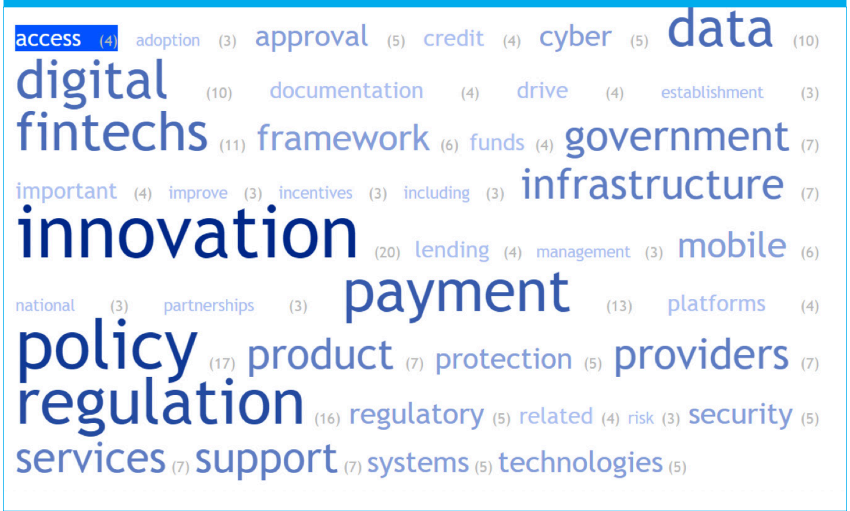


2.3 Public Support for Innovation

2.3.1 Efficacy of Forms of Public Support

- The top three forms of public support based on the 2019 survey's findings include: fiscal incentives (66 percent), provision of infrastructure and services (60 percent) and direct funding and demand-side support (51 percent each).
- The 2019 survey witnessed a shift in the order of priority in the top three areas compared to the 2018 survey as indicated below: demand-side support (66 percent), fiscal incentives (60 percent) and direct funding (51 percent).
- The figure below represents the institutions views on forms of public support that are considered most effective in promoting innovation activities within the institutions and the industry at large.

Figure 23: Public Policy Areas



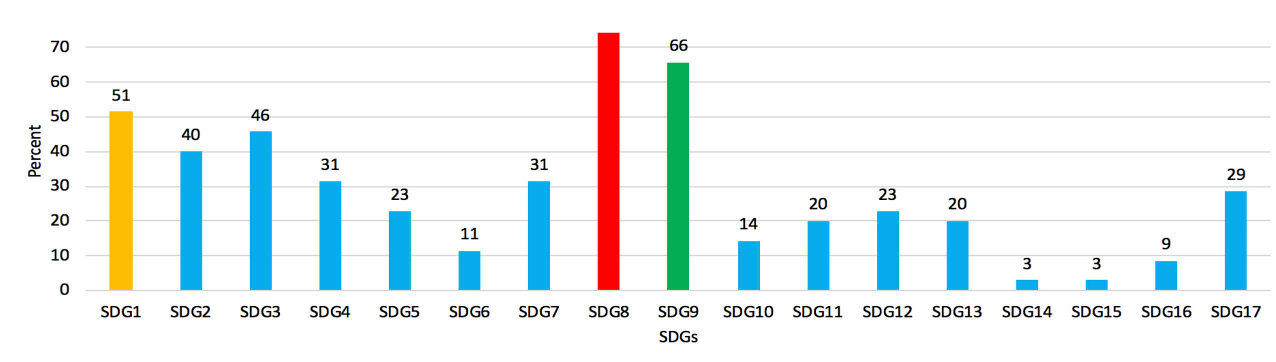
2.3.2 Public Policy Areas

- Top public policy suggestions include:
    - Amendment of regulatory framework to encompass emerging innovation products, practices and providers such as the Risk Management Guidelines (RMG).
    - Guidelines and policy around new payment systems and channels, cloud computing, data protection.
    - Regulation of systemically important technology providers to financial institutions.
    - The need for an innovation support centre within the CBK.
    - Implementation of infrastructure to support digital identity.
- The key bottlenecks identified by the institutions include:
    - Unclear regulatory framework on emerging technology such as cloud computing.
    - Improved turnaround time on product approvals.
    - The main bottleneck raised in the previous survey was the capping of interest rates. However, this law was repealed in November, 2019.
- The textual analysis below highlights public policy response suggestions by the institutions.

2.3.3 SDGs: Potential for Innovation-Related Activities Tied to Digitalization of Finance

- The top 3 Sustainable Development Goals (SDGs) with the most potential for innovation-related activities tied to digitalization of finance were SDG 8: Decent Work and Economic Growth (74 percent), SDG 9: Industry, Innovation and Infrastructure (66 percent) and SGD 1: End poverty in all its form everywhere (51 percent).
- In the previous survey, the priority of order from the findings was: SDG 9: Industry, Innovation and Infrastructure (86 percent), SDG 8: Decent Work and Economic Growth (69 percent) and SGD 3: Good Health and Wellbeing (49 percent).
- The figure below presents the SDG responses.

Figure 24: SDGs: potential for innovation-related activities tied to digitalization of finance

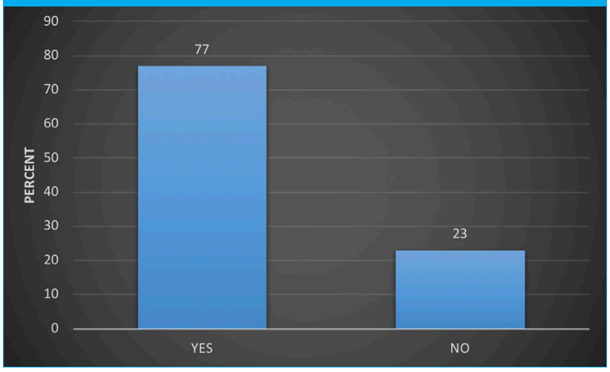


2.4 Afro-Asia Fintech Festival Assessment

2.4.1 Afro-Asia Fintech Festival 2019 Assessment

- 77 percent of banks attended the inaugural Afro-Asia FinTech Festival (AAFF) 2019 while only 14 percent of MFBs attended.
- Of the 23 percent of banks and 86 percent of MFBs that did not participate, majority indicated that they were not privy to the event details.
- Key value adds as highlighted by the attendees include:
    - Opportunity to interact with peers and stakeholders in different markets across the globe.
    - Understanding Central Bank of Kenya's commitment to growth and development of the banking sector in the digital age.
    - Allowed emerging FinTech companies to showcase their solutions.
    - Introduced emerging concepts for financial solutions.
    - Created beneficial networking opportunities for participants.
    - Brand visibility for the sponsors.

Figure 25: AAFF2019 Attendance by Institutions



- Institutions recommended that the next AAFF incorporate the following topics:
    - Case studies on Electronic Know Your Client (E-KYC) solutions.
    - Handling identity theft within banking solutions.
    - Open banking.
    - The role of sandboxes in bank and FinTech regulation
    - Digital Banking.
    - Central Bank Digital Currencies (CBDC).
    - Islamic banking advancements.

- Additionally, improvement areas as suggested by the institutions include:
    - Presentations: stage presentations to be done in the morning hours, group discussions to be allotted in the afternoons and screen projectors to be increased and be placed strategic positions.
    - Reduction in product pitching.
    - More success case studies of the key players and how FinTech and banks can collaborate for financial inclusion in the country.
- Opportunity for audience to suggest topics.
- Improve the private sector discussion numbers and have more than one topic and areas for the conversations so that content is not all centred on the plenary stage.
- Inculcate audience engagement in panel sessions to enable participation as opposed to speeches.

Annex 1

Glossary of Terms

Better Bank – An institution seeks to become a 'better bank' by leveraging on enabling financial technologies (FinTech) to digitize and modernize its operations and business practices. Its market knowledge and FinTech investment will significantly improve its banking services and products offering.

New Bank – An institution seeks to become a 'new bank' by creating a 'built for digital' banking platform. The institution shall apply advanced FinTech to provide banking services, minimize operational costs, improve customer experience, and market their products through social media.

Distributed Bank – An institution seeks to become a 'distributed bank' through collaboration and partnership with FinTech startups. The institution seeks to compete for the ownership of the customer relationship by providing niche banking services. Such joint ventures will allow consumers to use multiple financial service providers, through a 'plug and play' digital interface.

Relegated Bank – An institution seeks to become a 'relegated bank' by allowing FinTech startups and third-parties to provide and manage direct customer relationships through 'frontend' digital platforms. The institution will be relegated to offering commoditized banking functions such as deposit-taking, lending and risk management, to the digital platforms that own and manage the customer relationships.

Disintermediated Bank – An institution seeks to come a 'disintermediated bank' in which its digital platforms and technologies will enable 'direct matching' of consumer banking needs, without the need for a trusted third-party. Such services could include peer-to-peer lending.

SDG 1 – End poverty in all its form everywhere.

SDG 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

SDG 3 – Ensure healthy lives and promote well-being for all at all ages.

SDG 4 – Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

SDG 5 – Achieve gender equality and empower all women and girls.

SDG 6 – Ensure availability and sustainable management of water and sanitation for all.

SDG 7 – Ensure access to affordable, reliable, sustainable and modern energy for all.

SDG 8 – Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

SDG 9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

SDG 10 – Reduce inequality within and among countries.

SDG 11 – Make cities and human settlements inclusive, safe, resilient and sustainable.

SDG 12 – Ensure sustainable consumption and production patterns.

SDG 13 – Take urgent action to combat climate change and its impacts.

SDG 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

SDG 15 – Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

SDG 16 – Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

SDG 17 – Strengthen the means of implementation and revitalize the global partnership for sustainable development.

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