KENYA BANKERS ASSOCIATION 10TH ANNUAL

BANKING RESEARCH CONFERENCE 2021

WED 22ND TO **FRI 24TH** SEPTEMBER
8:30am - 12:30pm (EAT)

THEME: Banking Beyond COVID-19: Risk Assessment, Balance Sheet Adjustment and Exploring Options and Pathways to Strong and Sustainable Economic Recovery

10 TH YEAR ANNIVERSARY

Celebrating 10 years of Research on Financal Markets and Policy in Kenya

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CENTRE FOR RESEARCH ON

FINANCIAL MARKETS AND POLICY®

ABOUT KENYA BANKERS ASSOCIATION

Kenya Bankers Association is the umbrella body of the Banks licensed by the Central Bank of Kenya with a current membership of 47. The Association promotes and develops sound and progressive banking principles, practices and conventions and contributes to the developments of the sector. It influences the policy landscape by proactively engaging the policy development stakeholders for the development of a conducive business environment on behalf of its members. It also manages the public relations aspects of banking as a service industry. Kenya Bankers Association plays a major role in maintaining industrial relations through employee representatives; negotiating terms and conditions of employment; and arriving at settlements, provision assistance and guidance to the industry in interpretation and implementation of cost of living awards. KBA works to maintain close co-ordination and liaison with the Central Bank of Kenya, financial institutions, the Chamber of Commerce, management and educational institutions, Federation of Kenya Employers, and other such organizations for realizing the objects and purposes of the Association.

Moreover, KBA owns and operates the Automated Clearing House and in partnership with the Central Bank of Kenya has developed initiatives such as such as the Modernisation of Payment Systems (including the Cheque Truncation Project), the establishment of Currency Centres across the country, and the Kenya Credit Information Sharing Initiative.

ABOUT THE CENTRE FOR RESEARCH ON FINANCIAL MARKETS AND POLICY®

The Centre for Research on Financial Markets and Policy® 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 involving scholars and practitioners and conferences on key financial market issues. Through these activities, the Centre acts as a platform for intellectual engagement 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.

Visit ***www.kba.co.ke/research-center*** to access the suite of research publications.

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Welcome Remarks

From the CEO, Kenya Bankers Association

It is my singular honour to welcome you all to the *10th KBA Annual Banking Research Conference*, and thank you for taking time to join us. The fact that we have consistently hosted the *Kenya Bankers Association Banking Research Conference* over the past nine years confirms our commitment to deeply engage with our stakeholders and anchor our development on research and analytics in areas we consider essential for enhancing the industry's contribution to economic growth.

As we mark the 10th Anniversary of our conference, I take this opportunity to specifically thank our researchers, reviewers, and discussants, who have kept the engagements alive by making insightful contributions to the various thematic areas. At KBA, we believe that it is out of a candid engagement underpinned by rigorous analysis that we can mine ideas that will widen the extent to which the economy's financial system can support the realization of its growth and development aspirations.

We take note that some of the issues that we addressed in our first Research Conference in 2012 and the subsequent sessions have either given rise to practical solutions or have motivated further investigations by other researchers. All through the past nine conferences, we have picked on themes that resonate with the desire to be at the frontier of knowledge and practice.

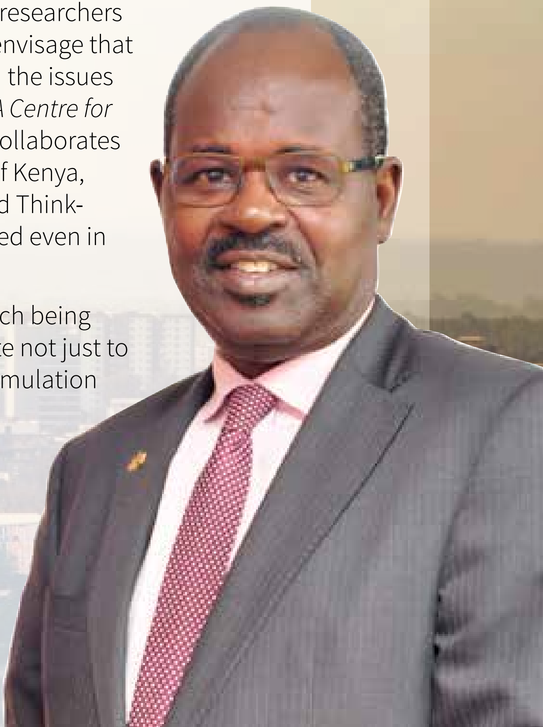
Our theme this year is ***'Banking Beyond Covid-19: Risk Assessment, Balance Sheet Adjustments and Exploring options and Pathways to a strong and sustainable Economic Recovery'***. It represents an appreciation of how expectations of our stakeholders – be they regulators, market players and customers – are fast-changing, particularly in the current environment characterized by great uncertainty occasioned by the COVID-19 pandemic. And unlike other shocks, such as the global financial crisis (GFC) that originated within the financial system, the COVID-19 pandemic has resulted in widespread global and domestic economic contraction, reflected in both demand and supply adjustments in a manner unprecedented, with direct implications on the financial system. But we are happy to note that, thus far, the banking system has been a critical cushion against the effects of the pandemic.

At the time of hosting last year's conference, the effects of the pandemic on the banking sector, while evident, particularly on the extent of loan loss provisioning, its full impact remained largely unknown. But what we have seen is a resilient industry that averted a credit squeeze to households and businesses even amidst off-trend asset quality deterioration.

Getting into 2021, there is no doubt that the Kenyan banking industry's resilience will play a critical role in supporting a strong and sustainable economic recovery. How it navigates the potential trade-offs of ensuring a stable system and supporting economic recovery is a tight balancing act, which is the focus of the papers lined up for this conference.

Given the diversity of our stakeholders and researchers that we host in this conference, we do not envisage that we will necessarily have a common view on the issues to be discussed. In recognizing this, the *KBA Centre for Research on Financial Markets and Policy®* collaborates with institutions such as the Central Bank of Kenya, the Academia, International Institutions and Think-Tanks to ensure that objectivity is maintained even in instances of divergent views.

It's my hope that the outcome of our research being showcased at this conference will contribute not just to debate but will also be a basis for policy formulation at both institutional and national levels.



Dr. Habil Olaka,
Chief Executive Officer,
Kenya Bankers Association

Welcome Remarks

From the Director, KBA Centre for Research on Financial Markets and Policy®

The *10th Kenya Bankers Association Banking Research Conference* presents an opportunity to focus on banking beyond the COVID-19 pandemic, especially on the risk assessment, balance sheet adjustments and, more importantly, on strategies to bring about a strong and sustainable economic recovery. The conference will bring together industry practitioners, regulators, policymakers, researchers, and the academia, providing a platform for a fruitful exchange of views, underpinned by objectivity.

At the centre of the discussions is the finance-economic growth nexus; particularly highlighting the important role the banking sector will continue to play in the economy, as the economy reels out of the adverse effects of the pandemic.

The eight papers and one methodological session lined up for presentation over the next three days will speak to three important questions:

- **One**, has the pandemic altered traditional views about risk and its assessment at the sector and aggregate level?
- **Two,** did the pandemic trigger adjustments in bank balance-sheet structures? How will the structural changes occasioned by the COVID-19 pandemic influence the sector's path /evolution post-pandemic?
- **Three,** what were the economic effects of the pandemic at both aggregate and sectoral level? Are there any evident potential channels towards a strong and sustainable recovery?

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Over the three days, the conference may not provide all the answers to these questions, but it will undoubtedly provide an opportunity for a comprehensive reflection. The diversity of authors- from academia, policy institutions and banking sector practitioners is unique, and allows for the interrogation of issues from different perspectives. The ensuing rigour of the presentations that does not come at the expense of policy and business relevance is a desirable output for all players in the financial system.

Even beyond the conference, we keep alive the debate on the subject matters. To this end, all the conference papers will be reviewed and initially published under the *KBA Working Paper Series*.

Dr. Samuel Tiriongo,
Director, KBA Centre for Research
on Financial Markets and Policy®

Programme

DAY ONE:
22nd SEPTEMBER

9:00 – 9:10 am	Welcome Remarks – **Dr. Samuel Tiriongo, KBA**
9:10 – 9:25 am	Remarks by the CEO, KBA - **Dr. Habil Olaka**
9:30 – 9:45 am	Remarks - **Chairman of the KBA Governing Council** **Mr. John Gachora, NCBA Group CEO**
9:45 – 10:00 am	Keynote Speech – **Mrs. Sheila M'Mbijjewe** **Deputy Governor, Central Bank of Kenya**
10:20 – 11:20 am	***What Drives MSME's Credit Choices? Business Versus Personal Loan Account Utilisation in Kenya*** **Presenters:** Hillary Mulindi, Kiplangat Josea, and Samuel Tiriongo (KBA) **Discussant:** Jared Osoro, FSDA
11:20 – 12:20 pm	***Banking System Adjustment to Shock: The Kenyan Case of Liquidity-Profitability Trade-Offs*** **Presenters:** Jared Osoro (FSDA) and Kiplangat Josea (KBA) **Discussant:** Samuel Tiriongo, KBA
12:20 pm	Closing Remarks

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DAY TWO:
23rd SEPTEMBER

8:30 – 8:40 am	Welcome Remarks – **Dr. Samuel Tiriongo, KBA**
8:40 – 9:40 am	*A Review of the Asset Quality Assessment in the Absence of Quality Data towards Optimal Credit Intermediation* **Presenter:** Andrew Njeru, KCB Group
9:40 – 10:40 am	*Data Analytics: Methodological Session* **Presenter:** John Olukuru & Joseph Theuri Gitonga, Strathmore University **Discussant:** Andrew Njeru, KCB Group
10:40 – 11:40 am	*COVID-19, Policy Interventions, Credit Growth and Financial (In)Stability* **Presenter:** Gillian Kimundi, Strathmore University **Discussant:** Roselyne Misati, CBK
11:40 – 12:40 pm	*Diversification, Loan Loss Provisions and Bank Earnings During the COVID -19 Pandemic: Evidence from Kenya* **Presenter:** Rogers Ochenge, Embu University & Strathmore University **Discussant:** Caroline Kariuki, Strathmore University
12:40 pm	Closing Remarks

Programme

DAY THREE:
24th SEPTEMBER

8:30 – 8:40 am	Welcome Remarks – **Dr. Samuel Tiriongo, KBA**
8:40 – 8:55 am	Remarks by the CEO, KBA - **Dr. Habil Olaka**
8:55 – 9:15 am	Remarks – Vice Chair of the KBA Governing Council **Ms. Rebecca Mbithi, Family Bank CEO**
9:15 – 10.15 am	***Bank Capital, Credit Risk and Financial Stability in Kenya*** **Presenter:** Samuel Kiemo, Camilla Talam and Irene. W. Rugiri, CBK **Discussant:** Benjamin O. Maturu
10:15 – 11:15 am	***Macroeconomic Shocks and Credit Risk in the Kenyan Banking Sector*** **Presenter:** Faith Atiti, Stephanie Kimani and Raphael Agung, NCBA Bank **Discussant:** Josea Kiplangat, KBA
11:15 – 12:15 pm	***Covid-19 and the Finance-Economic Growth Nexus in Kenya*** **Presenter:** Benjamin O. Maturu **Discussant:** Jackson Mdoe- Kenyatta University
12.15 pm	Closing Remarks

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1. *What Drives MSME's Credit Choices? Business Versus Personal Loan Account Utilisation in Kenya*

Authors: Hillary Mulindi, Kiplangat Josea, & Samuel Tiriongo, KBA

With most economies seeking to tap on MSMEs to navigate beyond the devastating impact of Covid-19, this paper seeks to unlock the MSMEs demand-side credit perspectives. Using 279 MSMEs from the KBA Inuka Enterprise program, we anchor our analysis on a three-step probit model with sample selection to examine the choices on the utilization of business versus personal accounts among enterprises. The results reveal that the enterprise's decision to borrow is sensitive to turnover and education level of the entrepreneurs. Furthermore, once a decision to borrow has been made, the choice to borrow from a bank versus a non-bank institution is once more influenced by the level of turnover and period an enterprise has been operational (age). Finally, on business versus personal account utilization, the gender of the entrepreneur, industry of operation and registration status of the enterprise would tilt the scale in favour of business account. On the implications of these findings, the MSMEs present an opportunity for banks to design products that mimic trade credits, in a bid to enhance credit supply to these enterprises. From the policy perspective, discussions around lessening the credit accessibility constraints imposed by the age of enterprise, turnover levels and the industry of operation limitations are key.

2. *Banking System Adjustment to Shock: The Kenyan Case of Liquidity-Profitability Trade-Offs*

Authors: Jared Osoro (FSDA) and Kiplangat Josea (KBA)

This paper has the dual objective of establishing whether episodes of market shocks necessarily trigger the choice between more liquidity than more profitability and ascertaining whether the post-shock recovery path necessarily is one of liquidity giving way to non-liquid assets growth and, therefore, more profitability that is accompanied by positive economic outcomes. Using annual bank-level data from 2002 to 2020 and a fixed-effects regression model within an unbalanced panel data framework, we establish that: (i) During a shock there are liquidity profitability trade-offs.

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The extent of those trade-offs is sensitive to bank-specific attributes, especially bank size, and is more pronounced among smaller banks than bigger ones (ii) The trade-offs ought to be seen beyond being self-preserving, but as a necessary adjustment to assure general market stability and subsequent restoration of the positive finance-growth nexus in a calm environment. The transition process requires, as a sufficient condition, a policy environment that is facilitative of real lending rates adjustments corresponding to the attendant risks as opposed to a sticky regime even on the back of expectations of a risk-based pricing mechanism being in place. Without policy disincentivizing the crowding-out, which is prevalent when asset quality is weakening, the transition after the shock to profitability that is aligned with the positive finance-growth nexus may be prolonged.

3. A Review of the Asset Quality Assessment in the Absence of Quality Data towards Optimal Credit Intermediation

Author: Andrew Njeru, KCB Group

The COVID-19 pandemic has posed a significant challenge for credit managers and risk management of financial institutions and regulators worldwide. The challenge faced arises because the consequences of outbreaks and epidemics are not distributed equally throughout, with some sectors of the economy suffering disproportionately. Therefore, this paper uses data obtained through web scraping to simulate firm's behaviour and performance during a crisis to estimate the sectoral impact of the pandemic and its pass-through to the portfolio of financial institutions and ultimately on economic growth. This proactive approach is critical due to the rapidly evolving nature of the crisis and the impact of various measures such as lockdown and selected sector shutdowns undertaken by authorities that may have diverse implications for different businesses in various sectors of the economy.

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4. *Data Analytics: Methodological Session on Artificial Intelligence's Potential for Banking in Kenya*

Authors: John Olukuru & Joseph Theuri Gitonga, Strathmore University

The importance and adoption of Artificial Intelligence schemes in supporting business operations in risk management and spurring revenue growth continue to gain traction globally. While this has been exacerbated by the disruptions caused by COVID-19 pandemic on the traditional sources of information, its utilization remains low particularly across many countries. In advanced economies however, as AI gains popularity in banking, financial institutions (FIs) are building on their existing solutions to transform customer experiences to solve increasingly complex challenges and expectations. This paper illustrates the potential of employing AI in banking to reduce costs, including through opportunities it offers to banks to leverage algorithms on the front end to smooth customer identification and authentication, mimic live employees through chatbots and voice assistants, deepen customer relationships, and provide personalized insights and recommendations. Further, AI can also be used by banks within middle-office functions to assess risks, detect and prevent payments fraud, improve processes for anti-money laundering (AML) and perform know-your-customer (KYC) regulatory checks. The main output involves an interactive dashboard illustrating application of the descriptive and predictive analytics at a click for a given business unit of a bank.

5. *COVID-19, Policy Interventions, Credit Growth and Financial (In)Stability*

Author: Gillian Kimundi, Strathmore University

Using sector-level (aggregate) measures of financial soundness/stability, this study seeks to investigate the effect of monetary and fiscal policy interventions on the banking sector's stability. Additionally, the COVID-19 period recorded an increased uptake in credit by the private sector and the central government. This fact motivates another key objective for this study, to determine the role (if any) played by the credit environment on

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financial stability's response to policy interventions. Rapid private sector growth is empirically seen as a vulnerability/amplifier for financial instability concerns. Overall, the results provide evidence that monetary and fiscal policies have clear implications on financial stability aggregates. Secondly, Policy effects on financial stability aggregates vary depending on the credit cycle. Thirdly, the results from the analysis point out that the choice of the most effective monetary policy tool is highly dependent on the credit environment as well. Lastly, there is an evident lack of "synergy" between fiscal policy and monetary policy actions in so far as financial stability is concerned, further underscoring the need for a comprehensive analysis on the coherent formulation and implementation of the two.

6. *Diversification, Loan Loss Provisions and Bank Earnings During the Covid -19 Pandemic: Evidence from Kenya*

Author: **Rogers Ochenge, Embu University & Strathmore University**

This paper examines the dynamics of bank income diversification and loan loss provisioning in the Kenyan banking industry. The study explores the evolution of these two phenomena with the objective of understanding how the ongoing Covid-19 pandemic has impacted banking outcomes in Kenya. The study employs bank level data over the period 2001 to 2020. Using panel regressions, the study finds that banks which diversify (functionally) their sources of revenues tend to experience higher and stable profits. The study also finds that with the economic downturn and uncertainties occasioned by the Covid-19 pandemic, Kenyan banks significantly increased loan loss provisioning plausibly as they forecasted elevated borrower defaults at the back of depressed economic activity. Further, the study provides insights into the structural differences in the provisioning behaviour that might be useful to policymakers.

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7. *Macroeconomic Shocks and Credit Risk in the Kenyan Banking Sector*

Authors: Faith Atiti, Stephanie Kimani & Raphael Agung, NCBA Bank

This paper examines how macroeconomic shocks affect credit risk in the Kenyan banking sector. Using an autoregressive distributed lag (ARDL) model within a time series framework, we establish the existence of both short-run and long-run dynamics in the interaction between macroeconomic variables and bank-specific characteristics. The results first show that the bank's asset quality is persistent. Second, the relationship between bank profitability and asset quality is negative in the short run but positive in the long run. The paper also documents a positive short-run relation between asset quality and private sector credit growth, which turns negative in the long run. Third, the bank asset quality-capital nexus is in the short-run characterized by a positive relationship, which turns negative in the long run. The established short-run and long-run dynamics affirm the existence of concavity in the relationship between bank capital and asset quality. NPLs continue to rise with increases in capital to a certain threshold (moral hazard effect), after which more capital build-ups decrease NPLs (disciplinary or regulatory effect). Finally, the speed of adjustment coefficient is negative and statistically significant. A shock in any period is self-correcting at a rate of 25.0%, implying that the long-run market equilibrium is restored within four quarters.

8. *Bank Capital, Credit Risk and Financial Stability in Kenya*

Authors: Samuel Kiemo, Camilla Talam & Irene. W. Rugiri, CBK

The paper sought to explore the role of bank capital in mitigating credit risk and promoting financial stability. To achieve this, we constructed a Financial Soundness Index to evaluate financial stability conditions. A Panel Vector Auto Regression Model was employed using annual bank-level data from 2001-2020 for 37 banks, to examine the effect of bank capital on credit risk and financial stability. The findings indicate that during the study period, financial stability conditions of Kenya's banking sector have remained resilient, though downward trending since 2015. The findings also reveal that higher bank capital ratios, lower credit risk

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and strengthen financial stability. The paper concludes that bank capital supports financial stability through mitigating credit risks. Therefore authorities should continue to adopt and implement appropriate capital policies to foster financial stability and promote bank lending.

9. Covid-19 and the Finance-Economic Growth Nexus in Kenya

Author: Benjamin O. Maturu

We re-examine the finance-growth nexus within the context of Covid-19 to empirically analyze the economic effects of Covid-19 and suggest appropriate policies for economic recovery and sustainable economic growth. Based on estimation an extended core financial intermediation model estimation results and impulse response function results, there is evidence supportive of: mutual causation between development finance and economic growth, McKinnon-Shaw-like financial repression, adverse Covid-19 pandemic labour supply shocks on: employment, economic growth, domestic bank credit and production technology and the effectiveness of monetary and fiscal policies. For quick recovery in bank credit creation and economic growth, there is need to eliminate the binding constraints on monetary and fiscal policies. The constraints are, in the case of monetary policy, lack of effective demand for bank credit due to low real disposable incomes and lack of effective supply of bank credit due to high credit and refinancing risks arising from large non-performing loans. Fiscal policy is constrained by lack of fiscal space to mount any meaningful stimulus package. Budget rationalization aimed to creating fiscal space is indispensable in unleashing the potential of monetary and fiscal policies in economic stabilization.

Kenya Bankers Association

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