KENYA BANKERS ASSOCIATION

STATE OF THE BANKING INDUSTRY REPORT 2020

August 2020

CENTRE FOR RESEARCH ON
FINANCIAL MARKETS AND POLICY®

STATE OF THE BANKING INDUSTRY REPORT 2020

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 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.

ABOUT THIS REPORT

The State of the Banking Industry (SBI) Report is an annual publication of the *Kenya Bankers Association Centre for Research on Financial Markets and Policy®* aimed at contributing to the understanding of the Kenyan banking industry. The *Report* is motivated by the fact that various stakeholders seeking perspective on the Kenyan banking industry engage various sources including market analysts, banks, the Kenya Bankers Association (KBA) Secretariat, the Central Bank of Kenya (CBK) and other financial sector regulators. This breadth of views is underpinned by the respective institution's analytical work, making this report contributory to the diversity of analyses.

The Kenya Bankers Association Centre for Research on Financial Markets and Policy® has compiled a database of financials at bank-level spanning over one and half decades. The database, together with other secondary data whose source is duly acknowledged, buttresses this report's analysis. The financial database, indicated as KBA data in the *Report*, is based on published financial statements by banks up to December 31, 2019.

The *Report's* analysis is undertaken at industry level as well as in the three-tier clusters – Large, Medium and Small. It also draws on the background work that is published under the Kenya Bankers Association *Working Paper Series* and other relevant published work as cited in the report and links provided as appropriate.

This issue of the *SBI Report* has benefited from discussions, comments and suggestions from banks, analysts and academic researchers. However, the analysis and inferences are entirely those of the *Report's* authors and should not be attributed to those who commented on it, the KBA General Body, and Governing Council.

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МОНГОЛИЯ
АРАВИЙСКОЕ
МОРЕ
ЮЖНО-КИТАЙСКОЕ МОРЕ

FOREWORD

It is my singular pleasure to present to you our *Second Issue* of the *Kenya Bankers Association's State of the Banking (SBI) Report*. As highlighted in the *SBI Report*, there is an obvious focus on the banking industry as it sits at the centre of the promise of the economy's recovery from the current shock that has revealed itself in subdued growth.

As the *Report* argues, addressing an economic slowdown at a time of financial fragility is challenging compared to an initial condition where the epicentre of weakness is not the financial system. Fortunately, as the *SBI Report* shows, even amidst conditions that have affected balance sheet growth and asset quality, the Kenyan banking system remains sufficiently capitalised.

The implication of the capital sufficiency with adequate buffers means that the banking industry, which demonstrably dominates the Kenyan financial system, has remained a key line of defence in the economy when it comes to responding to the current economic slowdown.

As the banking industry continues to enhance its efficient operating model, and seeking economies of scale that are demonstrably associated with efficiency gains, individual market players are navigating the increasingly competitive market environment through innovative operations.

Our anticipation is that as the landscape changes, so does the market structure and market power dynamics. Cognisant of the regulatory environment that seeks to safeguard stability, it remains equally dynamic, and customer expectations that are progressively becoming sophisticated, the challenge to the industry is to invest resources in remaining at the frontier of both regulatory and customer expectations.

It is my hope that this *Report* enriches your understanding of the Kenyan banking industry, especially with regards to how it interacts with the various economic agents.

Dr. Habil Olaka,
Chief Executive Officer

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ABBREVIATIONS

CAK	Competition Authority of Kenya
CAR	Capital Adequacy Ratios
CBK	Central Bank of Kenya
CIR	Cost-to-Income Ratio
EAR	Equity-to-Asset Ratio
GDP	Gross Domestic Product
GFDD	Global Financial Development Database
IMF	International Monetary Fund
KBA	Kenya Bankers Association
KNBS	Kenya National Bureau of Statistics
LAR	Loan-to-Asset Ratio
NIM	Net interest margins
NPLs	Non-Performing Loans
PBT	Profit Before Tax
ROA	Return on Assets
ROE	Returns on Equity
SBI	State of the Banking Industry
SOEs	State Owned Enterprises
TRWA	Total Risk-Weighted Assets
WDI	World Development Indicators

EXECUTIVE SUMMARY

- There is evident focus on the state of the banking industry now that the economy is characterised by a noticeable slowdown in output associated with the coronavirus (COVID-19) pandemic. The focus on the industry is underpinned by the obvious strong association between credit to households and non-financial corporations and economic output performance.
- As at the end of 2019, the banking system's total assets stood at KES 4.8 trillion, out of which loans and advances amounted to KES 2.7 trillion. The banking system's total asset continues to grow, albeit modestly; growing by 9.2 percent. The observed growth being driven mainly increase in credit to the private sector, although trapped below the double-digit level observed pre-2017.
- Non-performing Loans (NPLs) remain elevated, as a share of gross loans still in double-digits. By the end of 2019, NPLs as a share of gross loans stood at 12.6 percent, a static level from the previous year's (2018) 12.7 percent. This points to the fact that the stock of NPLs remain high at a time when growth of credit is subdued. Even with the position of asset quality as outlined, the banking system is adequately capitalised, implying therefore that the banking system has sufficient loss-absorbing ability to wither market shocks without triggering systemic instability.
- While there remains significant scope for the banking industry efficiency to improve, it is evident that the market is in the right trajectory. And indeed, it is increasingly evident that financial performance that stems from such efficiency gains comes with the endeavour to enhance operational economies of scale.
- The pursuit of economies of scale has underpinned the observed market-driven mergers and acquisitions. These developments continue to shape the structure of the banking industry. Any changes in market power arising from mergers and acquisitions doesn't come at the expense of competition. The competitive gains arising thereof have enhanced the pursuit for efficiency.
- We establish a strong, unambiguous causal effect of bank credit on economic performance. Under the conditions of constrained borrowers seeking accommodations on their existing obligations, and deteriorating asset quality, banks will likely take a conservative view regarding credit expansion going forward. Going by the nexus that this report has established between credit expansion and economic growth, the anticipated subdued growth in private sector credit – both from a demand and supply viewpoint – implies that limited growth momentum will be from private sector credit.

Chapter 1

INTRODUCTION

There is manifest focus on the state of the banking industry now that the economy is characterised by a noticeable slowdown in output associated with the coronavirus (COVID-19) pandemic. The spotlight on the industry is underpinned by the obvious strong association between credit to households and non-financial corporations and economic output performance. The evident feedback effect between credit and economic performance is critically important, especially under the current circumstances of broadly weak demand, disrupted production and therefore, weak supply, and eroded business confidence.

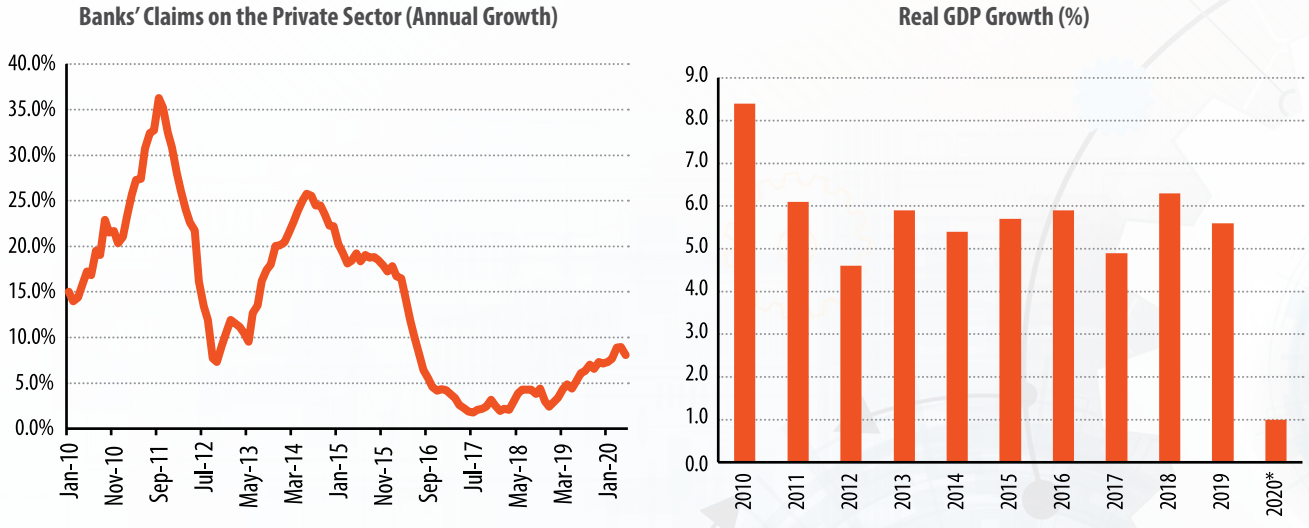
The Kenya Bankers Association (KBA) *State of the Banking Industry (SBI) Report* for 2020 takes cognisance of the fact that the feedback effect between credit growth and output growth is never straightforward. On the one hand, there is the bank lending channel whereby banks respond to risks associated with the broader economy by either increasing or decreasing the rate of credit extension. On the other hand, is the borrowers' channel whereby the ability or lack thereof of firm or household to borrow from either banks or alternative sources is a key influence on the association between credit growth and output growth.

Over the past four years, banks claims on the private sector have been growing at a crawling pace. Over the same period, the economy was registering decent real output growth – except in 2020 when the COVID-19 shock has triggered fragility **(Figure 1)**. The obvious disconnect between credit to the private sector and economic growth in the recent past presents a conundrum.

It is clear that much of the growth over the period was bolstered by strong government expenditure both on recurrent and infrastructure. It is clear too that the rising expenditure that was not matched by sufficient revenue

> "The obvious disconnect between credit to the private sector and economic growth in the recent past presents a conundrum.

Figure 1: Banks' Credit to the Private Sector and Economic Growth



Source: CBK, KNBS; *projection

growth meant that government borrowing – both domestic and external – was necessary to bridge the revenue gap. But as observed in KBA (2019)[1], the Government's borrowing binge has occasioned the crowding-out effect that reveals itself through the quantity channel (where resources that could otherwise go to the private sector are lent to the Government) and the price channel (where the Government's borrowing appetite influences the cost of credit).

The projected slowdown in economic growth in 2020 has an important dimension to the state of the banking industry. As would realistically be expected, credit market conditions will remain tight. That portends sustenance of the observed slow growth of credit to the private sector occasioned by the risks associated with the pandemicinduced economic shock. The ensuing dilemma is that economic recovery necessitates that credit to the private sector picks traction.

The behaviour of the credit market will be shaped by the regulatory tone that of necessity has to appreciate the balance between the need to support the economy given the pandemic-induced slowdown and the imperative of broad market stability. As recent studies confirm [see for instance Alfaro, Garc´ıa-Santana and Moral-Benito (2018)[2]] shocks to the credit market reverberate differently depending on whether the economy is booming or contracting.

The tension between risk aversion by banks on the back of high levels of non-performing loans (NPLs) and the need to spur credit recovery as a prerequisite for economic recovery from the near-contraction is essentially guided by the appreciation of the implication of which direction the tradeoff tilts. The *SBI Report* for 2020 provides the grounding for evaluating the direction of such a tilt. The Kenyan banking industry is navigating the pandemic shock having begun 2020 with adequate capital and liquidity buffers. In line with the IMF-World Bank (2020)[3], the buffers have been deployed to support borrowers affected by the pandemic, promote balance sheet transparency as well as banks' business continuity.

The above background provides the setting upon which the state of the banking industry is outlined. It provides the underpinning context for understanding the interaction between the market players, the regulatory requirements, customer and shareholder expectations, and how the interactions feed into banks' financial performance and the economy at large.

The various parameters of the performance of the banking industry for the period ending December 2019 presented in Chapters 2, 3 and 4 of this report is a platform for reflection on how such performance is consequential of the interactive process between finance, regulation and economic performance going forward. An analysis of the structure of the banking industry and its implication on intermediation efficiency, and competition is presented in Chapter 5 while Chapter 6 presents a deep dive into the credit market dynamics, exploring on what they mean for the economy.

1 KBA (2019), *State of the Banking Industry Report 2019,* The Centre for Research on Financial Markets and Policy® (*https://www.kba.co.ke/downloads/State%20of%20Banking%20Report%202006 18%20(web).pdf*)

2 Alfaro L, Garc´ıa-Santana M and Moral-Benito E., (2018), *"On the Direct and Indirect Real Effects of Credit Supply Shocks",* Harvard Business School Working Paper 18 – 052. (*https://www.hbs.edu/faculty/Publication%20Files/18-052_570151bd-d751-400f-ad9b-cdb8754b649d.pdf*)

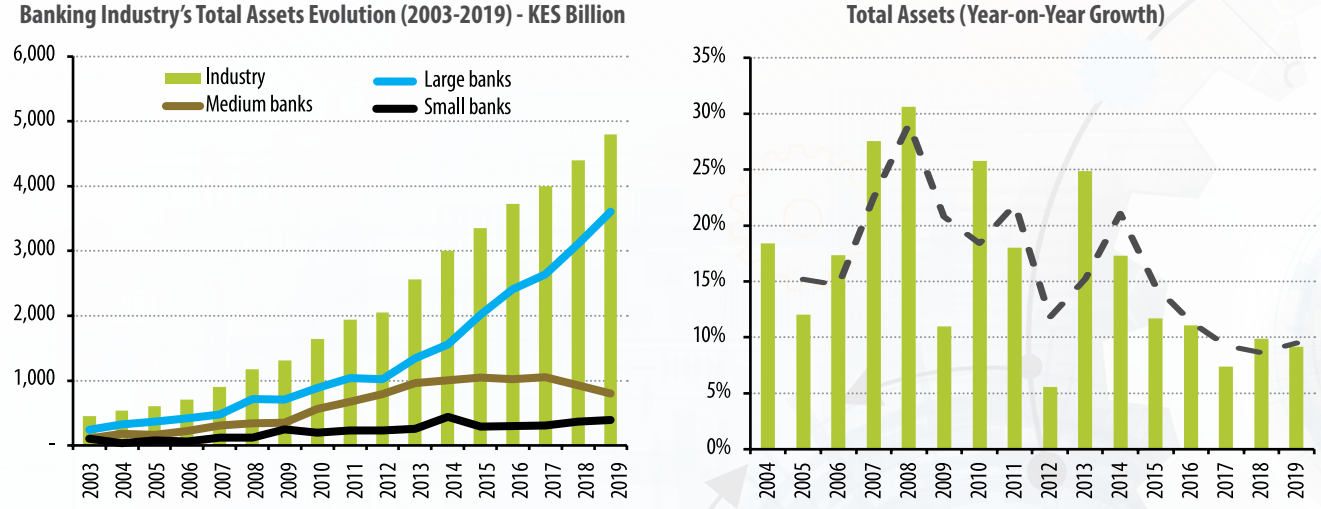
3 IMF-World Bank (2020), COVID-19: "*The Regulatory and Supervisory Implications for the Banking Sector A Joint IMF-World Bank Staff Position Note*"; May. (*file:///C:/Users/josoro/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/IMFWBSPNEA2020001%20(1).pdf*)

Chapter 2

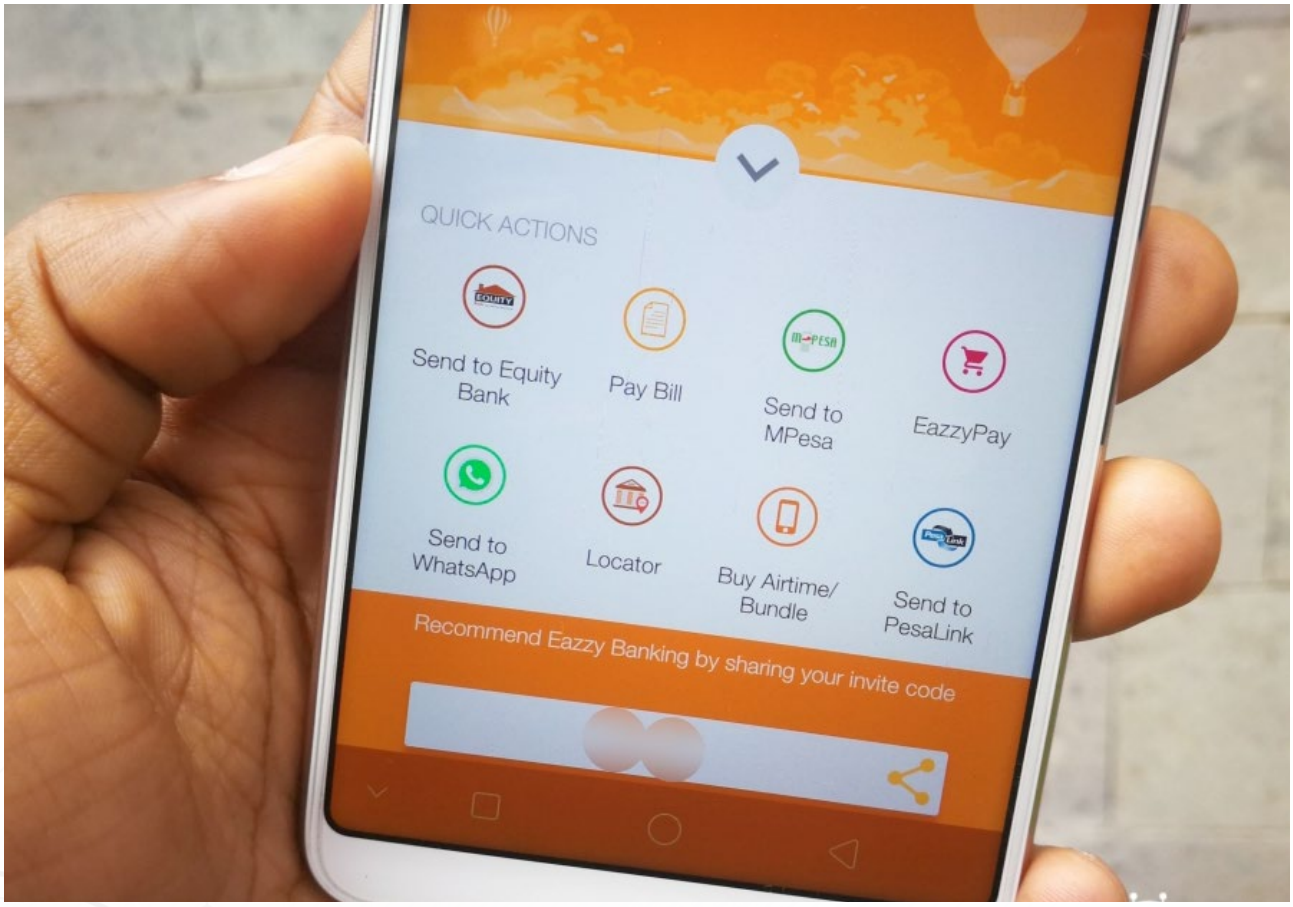
INDUSTRY GROWTH – FIZZLING MOMENTUM?

The banking system's total asset continues to grow, albeit modestly; growing by 9.2 percent as at the end of 2019. The growth was mainly driven by an increase in credit to the private sector, although trapped below the double-digit level observed pre-2017 (**Figure 2**).

Figure 2: Total Assets



Source: *KBA*

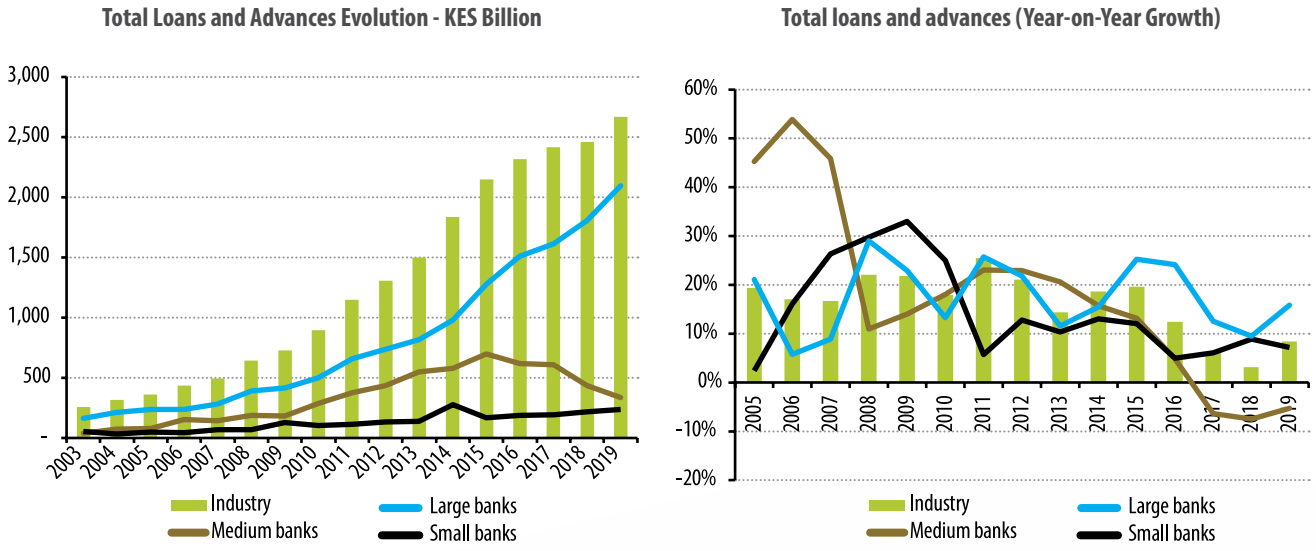


Among small banks, while growth remains in the positive territory, it is feeble while growth among medium-sized banks has been characterized by contraction in the past three years.

In 2019, total loans and advances accounted for 55 percent of industry's total assets, while holdings of government securities and placements in other banks accounted for 35 percent and percent respectively. In terms of asset growth, the highest growth was registered among large (Tier 1) followed with small banks (Tier III), but muted among medium-sized (Tier II) banks.

While the growth of loans and advances by historical standards remained weak, its trajectory in 2019 was positive, growing by 8.4 percent compared to 1.9 percent in 2018 and 4.4 percent growth in 2017. The observed growth continued to be supported by a sizeable and significant growth among large banks. Among small banks, while growth remains in the positive territory, it is feeble while growth among medium-sized banks has been characterized by contraction in the past three years **(Figure 3)**.

Figure 3: Total Loans and Advances

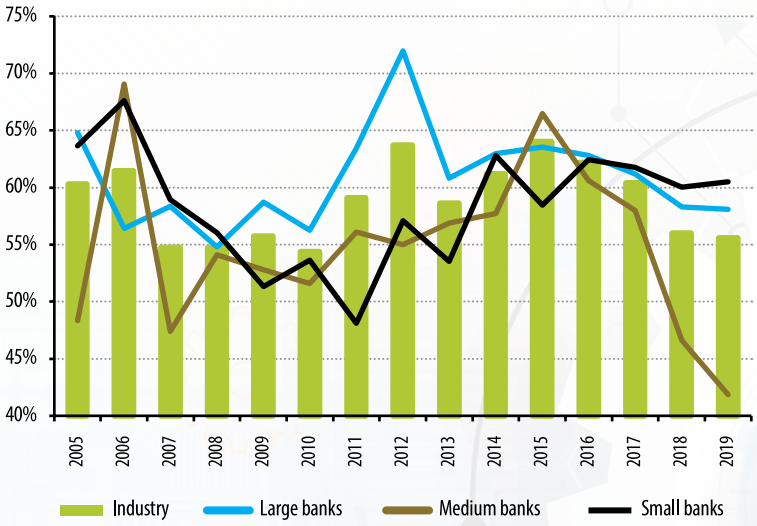


Source: KBA

The loan-to-asset (LTA) ratio, a measure of the percentage of total loans outstanding with respect to total assets and a critical driver of income generation has been on a decline since 2015. In 2019, it stabilised at 55.6 percent compared 56 percent in 2018 (**Figure 4**) suggesting that the unutilized asset capacity, can comfortably meet any unforeseen fund requirements (i.e. withdrawals of deposits from the banking system)The stability of the loan-to-asset (LTA) ratio continued to be supported by the banking system's increased diversification in sources of income especially investment in government securities and thus supporting the growth in its asset base.

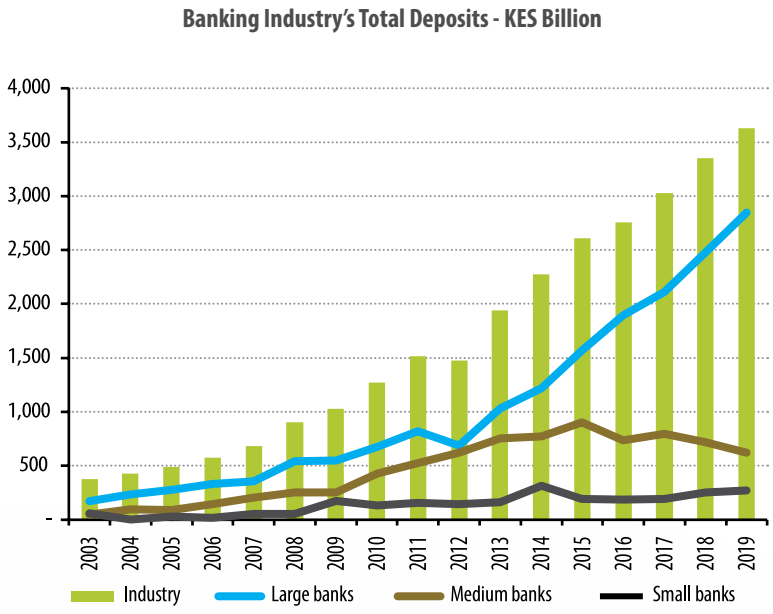
While deposits in 2019 continued to grow, it remained lower than growth registered in 2018, partly reflecting the reduced momentum in the economy. In 2019, growth in bank deposits was below double-digits, increasing by 8.2

Figure 4: Loan-to-Asset Ratio

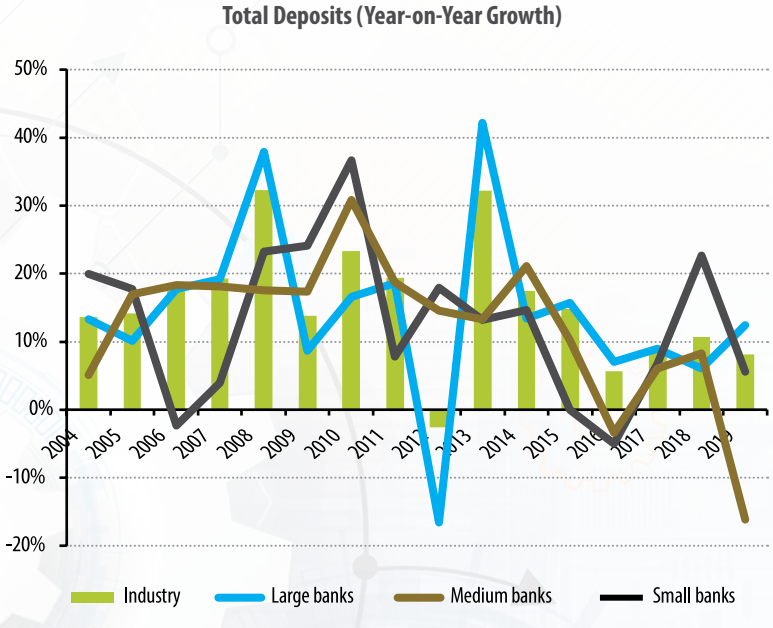


Source: KBA

Figure 5: Total Deposits



Source: KBA



Source: KBA

percent compared to the 10.8 percent and 9.8 percent growth in 2018 and 2017, respectively **(Figure 5)**.

Across banks, growth in deposits mirrored the industry's growth pattern with large banks maintaining its historic double-digit growth. In 2019, deposits of large banks grew at 14.5 percent compared to 8.4 percent growth in 2018 and 11.1 percent growth 2017. Among small banks it grew at 7.9 percent but was characterised by a contraction among medium bank.

As banks adjust their operating strategies in line with the prevailing business environment, their intermediation priorities have been navigating the profitability – liquidity tradeoffs. The banking system's loan-to-deposit ratio has been on a declining trend over the past five years, averaging 78.6 percent for the period 2015 and 2019 **(Figure 6)**. This trend that mimics the loan-to-asset (LTA) ratio reflects the tightened credit conditions, especially during the interest capping environment.

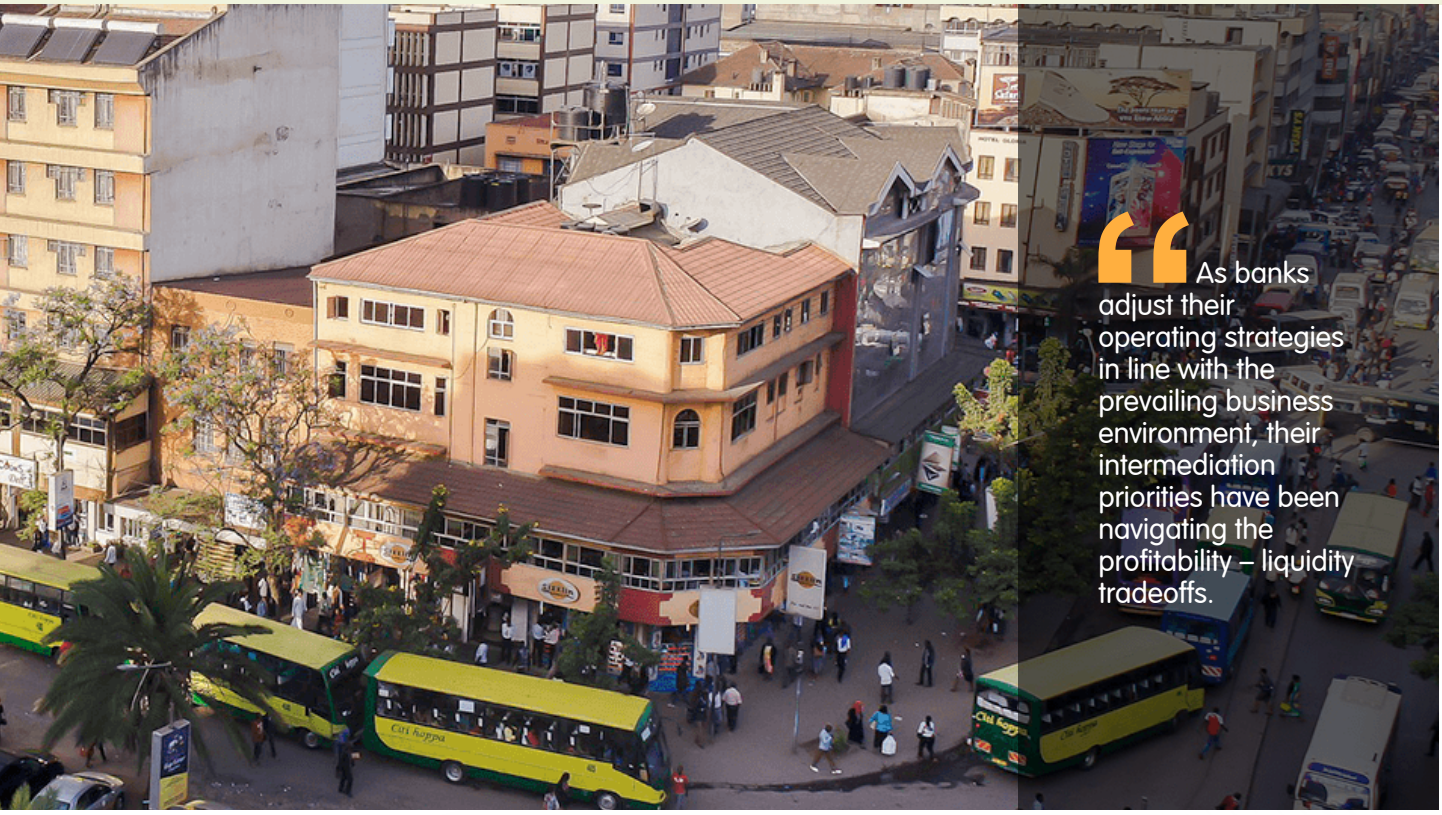
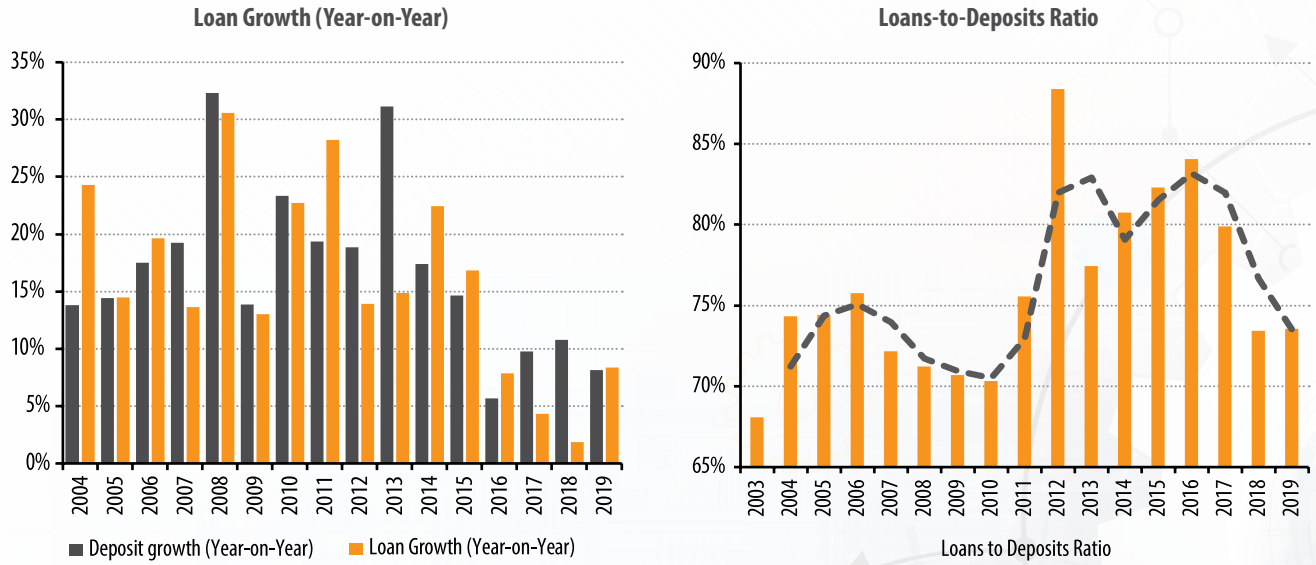


Figure 6: Loans and Deposits Evolution



Source: KBA

Chapter 3

ASSET QUALITY – PERSISTENT CONCERNS?

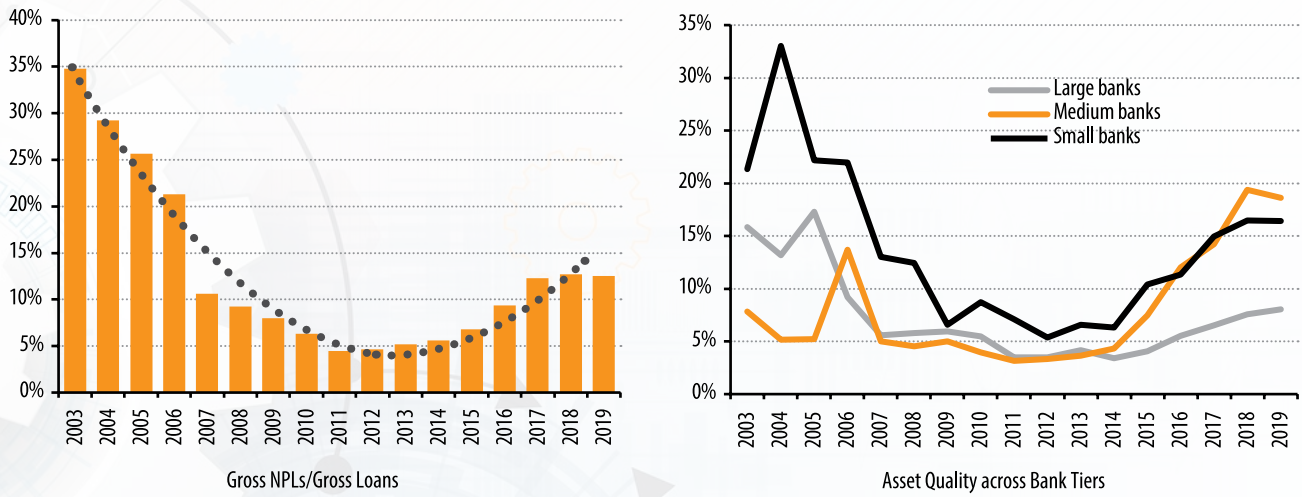
Non-Performing Loans (NPLs) remain elevated, as a share of gross loans still at double-digit level. By the end of 2019, NPLs as a share of gross loans stood at 12.6 percent, an almost static level of12.7 percent recorded in 2018 **(Figure 7)**. This points to the fact that the stock of NPLs remain high at a time when the growth of credit is subdued.

Further, the NPLs' distribution across banks remains non-homogenous; at double-digits among small and medium-sized banks and within single-digit among big banks.This reflects a case of the denominator effect being at play where large bank's loan book has been growing faster than those of small and medium banks such that even as loan defaults rise, the effect is marginal for large banks but significantly higher for small and medium-sized banks.

In addition, this further speaks to market tradeoffs where market liquidity conditions occasion small to medium-sized banks to prefer being slightly more liquid than more profitable, hence their more conservative approach to credit growth than big banks.

The share of the NPLs reveals the extent to which market uncertainty has filtered into the risk attitude of banks, and consequently the adjustments they are making regarding loan portfolio growth, adherence to regulatory requirements as well as shareholder expectations. That elevated NPLs is associated with risk averseness and consequently lowering the rate of growth of credit is evident **(Figure 8).** This observation

Figure 7: Asset Quality in the Banking System



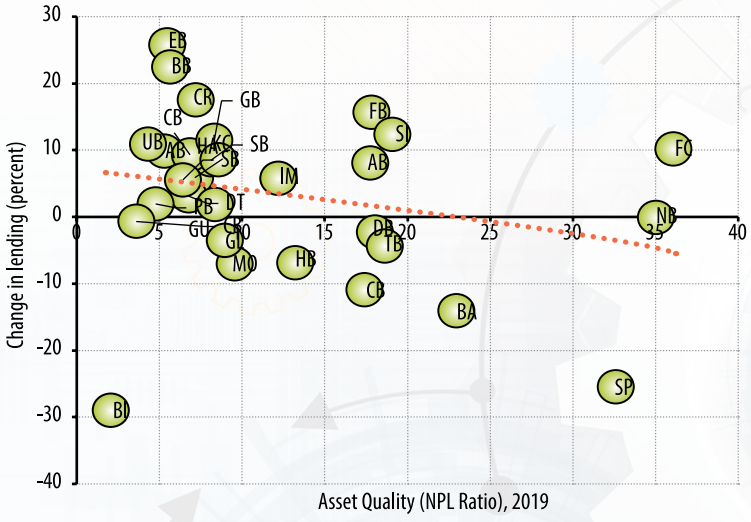
Source: KBA

is aligned to recent studies [e.g. Raunig, et al. (2017)[4]] that empirically determine that banks adjust loan supply in times of higher uncertainty, with the reduction amplifying the direct effect of higher uncertainty on household and firms, resulting in a further decline in investments and consumption.

Against the above background, provision coverage registered a substantial increase in 2019 from their 2018 levels, its share of NPLs rising by 8.2 percent to 66.8 percent in 2019. The levels of coverage slightly vary across banks with large bank's coverage at 66 percent, the medium-sized bank's at 65 percent and 72 percent among small

4 Raunig, B., Scharler, J., and Sindermann, F. (2017) "Do Banks Lend Less in Uncertain Times**?"**, *Economica*, Volume 84 (36) pp. 682 -711. (See the working paper version is here: *https://www.econstor.eu/bitstream/10419/101084/1/780100263.pdf*)

Figure 8: Changes in Lending and Asset Quality



Source: KBA

banks **(Figure 9)** partly reflecting the differences in asset quality deterioration as banks across the board embrace adoption of the forward-looking provisioning standard under IFRS 9.

Even with the position of asset quality as outlined, the banking system is adequately capitalised. As **Table 1** shows, the ratio of total capital to the total risk-weighted asset on the rise from 18 percent in 2018 to 19.2 percent in 2019. The ratio of core capital to total risk-weighted assets and core capital to total deposits stood at 16.9 percent and 17.4 percent, respectively. The resilience of the banking system as could be inferred from buffers above the minimum regulatory capital adequacy ratios signal the existence of sufficient loss-absorbing ability of the banking system to wither market shocks without triggering systemic instability.

Figure 9: Loan Loss Provisions to Non-performing Loans

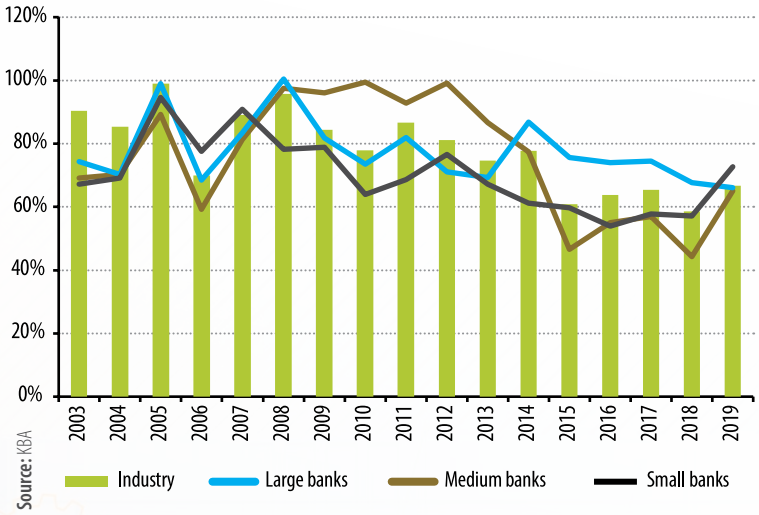


Table 1: Capital Adequacy Ratios

	2015	2016	2017	2018	2019	Minimum Capital Adequacy Ratios
Core Capital/ TRWA	15.7%	16.9%	16.4%	16.6%	16.9%	10.5%
Total Capital/ TRWA	18.5%	19.4%	18.7%	18.0%	19.2%	14.5%
Core Capital/ Total Deposits	16.9%	19.0%	18.1%	17.3%	17.4%	8.0%

TRWA = Total Risk Weighted Assets

Chapter 4

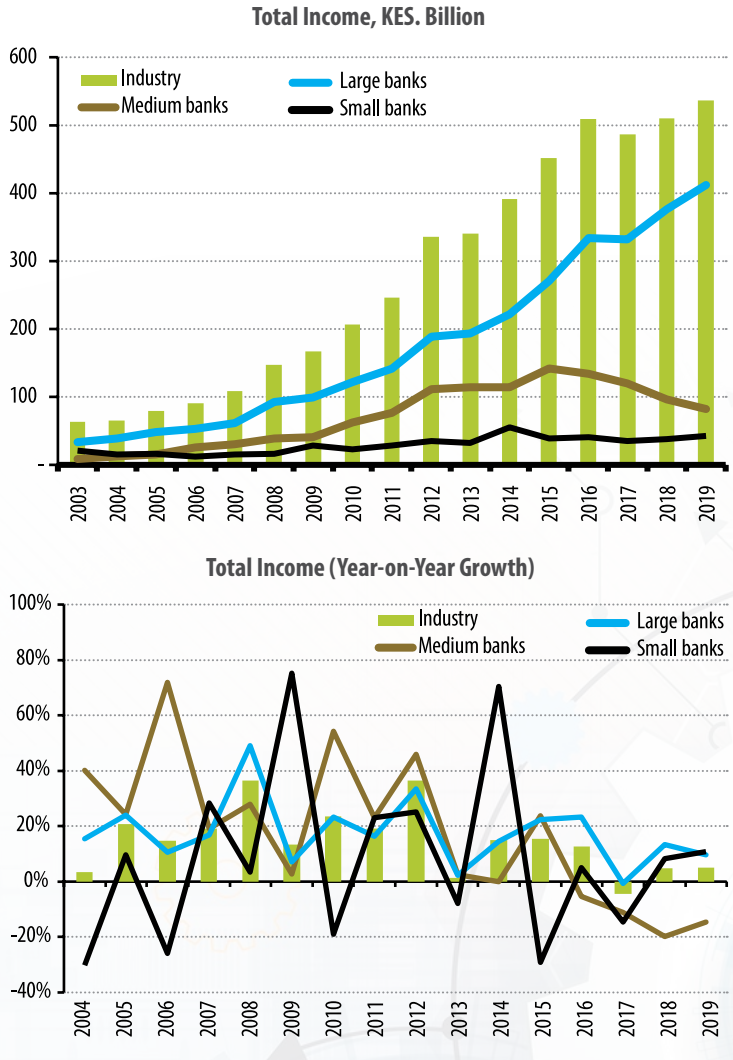
FINANCIAL PERFORMANCE – SQUEEZED TO A CORNER?

Banks' income remained broadly unchanged from 2018, its rate of growth marginally rising to 5.2 percent in 2019 compared to 2018's 4.8 percent. The overall income growth, however, masks the heterogeneity evident across banks. Among big and small banks, income grew at 9.6 percent and 10.9 percent respectively, while among medium banks, it contracted by 14.6 percent (**Figure 10**).

It is noteworthy that the share of interest income on loans and advances have been on a declining trajectory from its 2015 level of 61 percent, and stood at 49 percent in 2019 **(Figure 11)**. The last time the contribution of interest on loans and advances to total income was below 50 percent was in 2010. As that share of interest income on loans and advances has been declining over the past half a decade, that of interest from government securities in the past decade has been rising from 15 percent in 2007 to 23 percent by 2019.

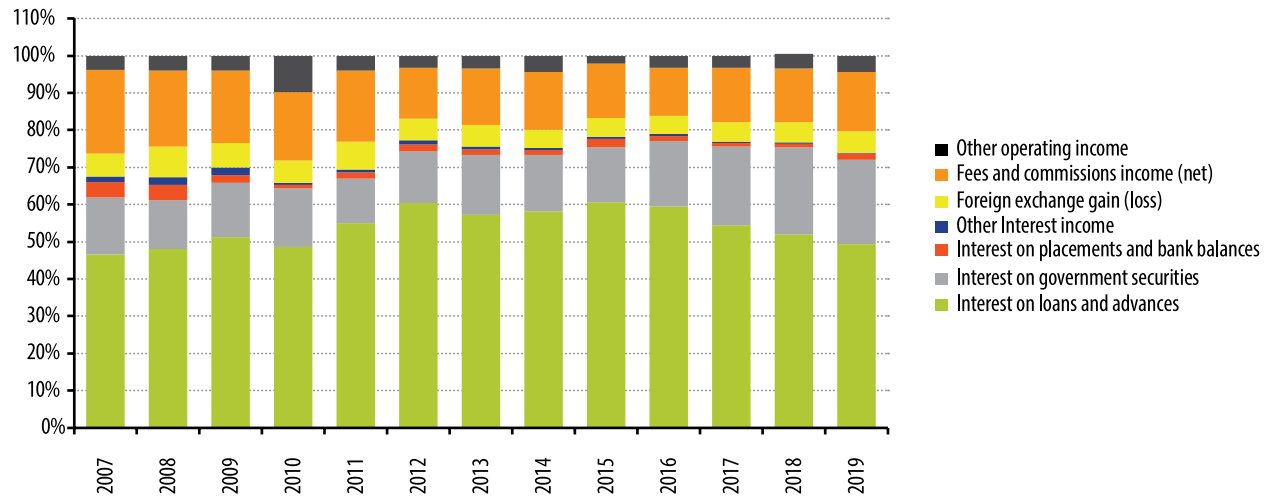
The stagnation in the rate of growth of banks income is attributed to a general contraction in most drivers of incomes. Interest on loans and advances declined by 2.7 percent in 2019, while that from investment in government securities and other interest-earning assets by 0.6 percent and 0.1 percent, respectively. The observed growth was buttressed by a 1.6 percent increase in fees and commission income, a 0.5 percent expansion in interest incomes from placement in other banks, as well as a 0.2 percent increase in income from foreign exchange trading.

Figure 10: Total Income



Source: KBA

Figure 11: Disaggregated Incomes Sources



Source: KBA

With the stagnating rate of income growth, banks have deployed cost rationalisation measures. Even with such measures, the costs have remained on an upward trajectory, growing by 4.8 percent in 2019 compared 2.0 percent in 2018 **(Figure 12)**. The response of banks cost management measures across the various tiers mimics the income growth trajectory earlier discussed; large banks and small banks are the key drivers of the costs' growth as their remain in the negative territory while the medium-sized banks have seen cost reduction since 2016.

Figure 12: Total Costs

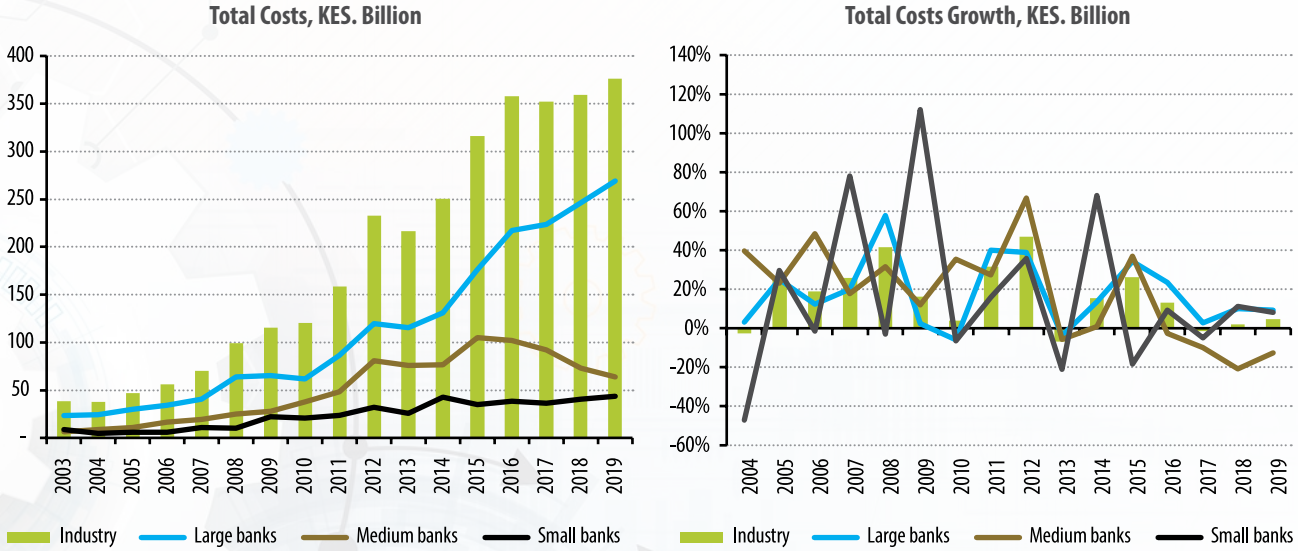
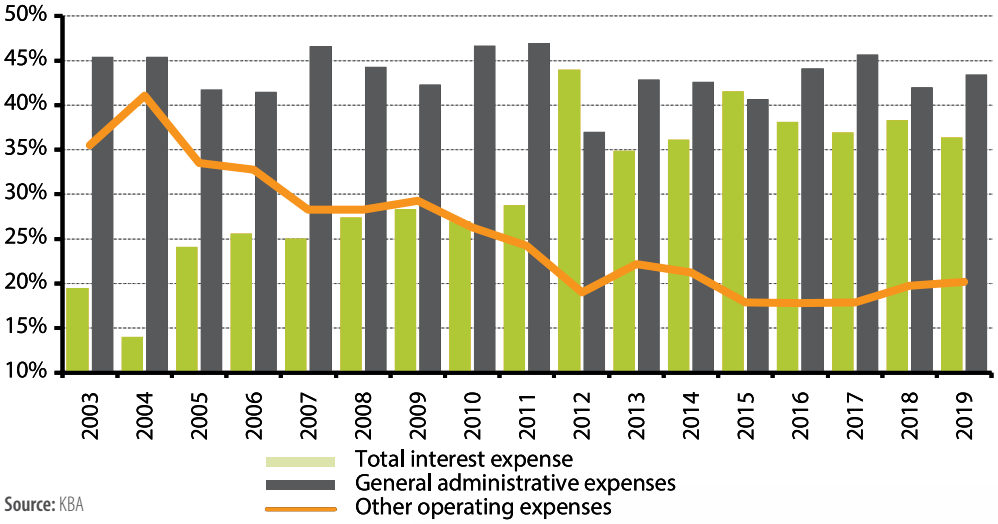


Figure 13: Disaggregated Cost Items



Source: KBA

Administrative and interest expenses are the two main cost components for banks, accounting for 43 percent and 36 percent of banks' costs in 2019 respetitively **(Figure 13)**. While the deployment of technology and branch network rationalisation has been deployed as a means of managing general operational expenses, albeit with mixed performance, interest expenses have remained elevated over much of the past decade. These two aspects speak to the structural dimensions to the high cost of lending.

Given the attention that the cost of credit draws from policymakers, the legislative class and the borrowing public, the funding cost for banks presents a dilemma considering that it has both exogenous as well as endogenous attributes. **Figure 14** shows that funding costs have stabilised in the range of 2.0 percent to 2.6 percent over the period 2013 to 2019. In 2019, it stood at 2 percent compared to 2.2 percent in 2018.

Large banks have been able to lower their marginal cost of funding5 than medium and small banks, an observation partly attributable to the advantage of economies of scale, even so, this advantage is narrowing especially between medium-sized and large banks[6]. Similarly, the differential between the industry average and smaller banks' funding costs has been closing; but remains above the industry average. The lower funding costs among large banks points to three factors, all of which linked to economies of scale. First, they are more diversified and thus perceived as safer. Second, unlike small-sized banks, they can take advantage of their spread to mobilise more retail deposits that are often cheaper than wholesale deposits; that is they are more cost-efficient. Third, they have lower NPL ratio, which positively correlates with lower funding costs[7] as **Figure 15** shows.

5 This is the cost of raising an additional unit of funding.

6 The funding costs among large banks has consistently been below the industry average with its funding costs standing at 1.7 percent in 2019 compared to 1.9 percent in 2018. Among medium banks the pattern of funding costs stabilized at the 2.6 percent level recorded in 2018 while smaller bank's funding costs contracted by 10 basis point to 3 percent from 3.1 percent in 2018.

7 The transmission channel is such that a higher NPL ratio calls for more provisioning in tandem with the increased balance sheet riskiness. As a result of the deteriorating quality of a bank's portfolio investors would be seeking higher returns and this leads to an elevated funding costs for a bank.

"Given the attention that the cost of credit draws from policymakers, the legislative class and the borrowing public, the funding cost for banks presents a dilemma considering that it has both exogenous as well as endogenous attributes.

Figure 14: Average Costs of Funds

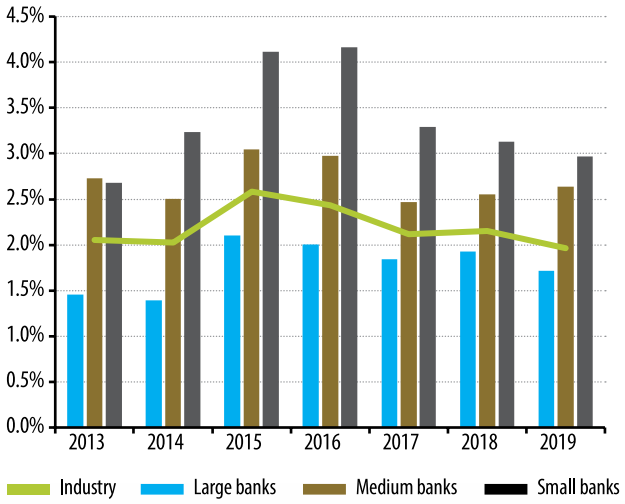
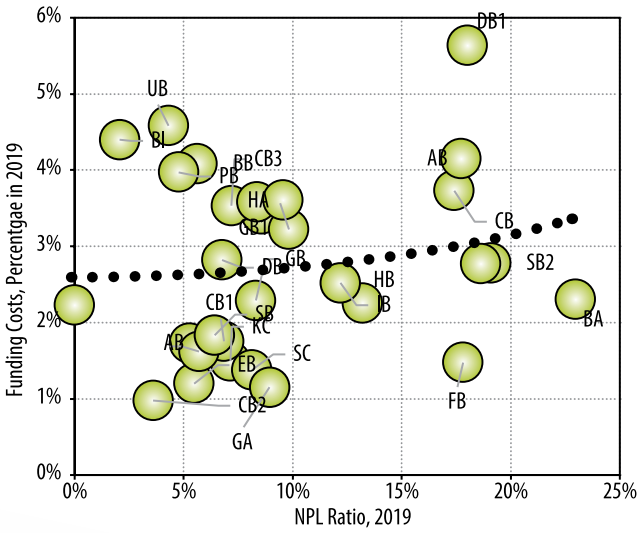


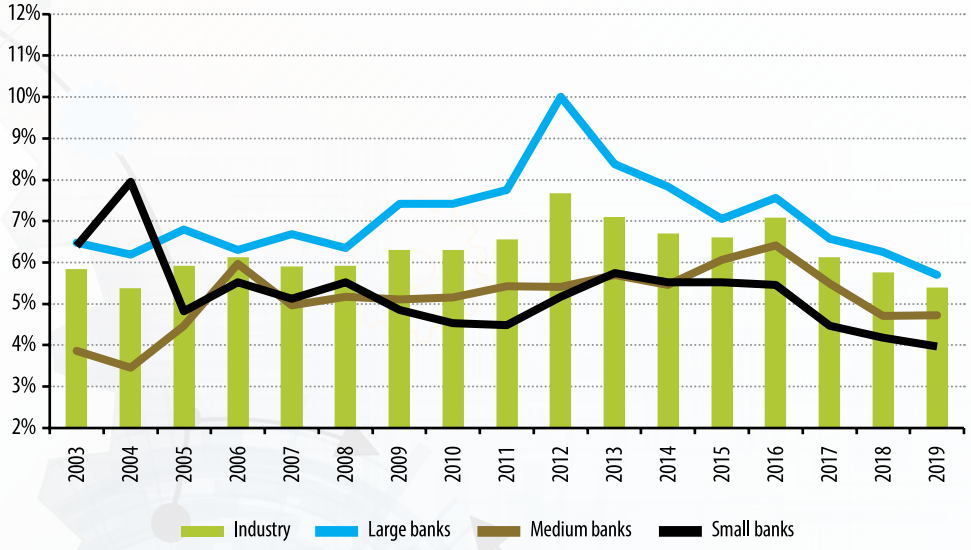
Figure 15: Funding Costs and NPL Ratio



Source: KBA

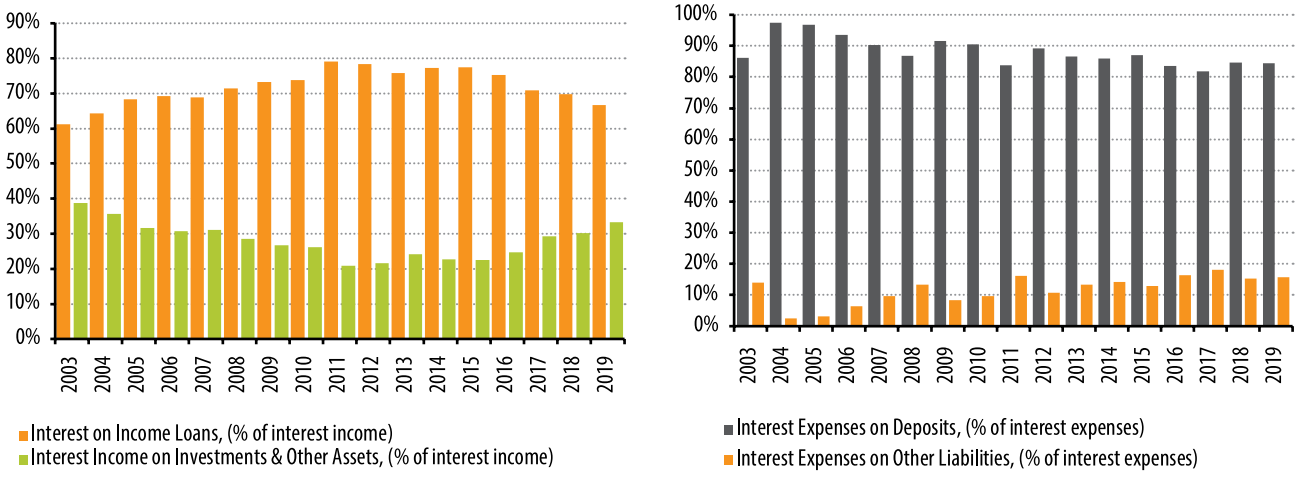
Net interest margins, one among many of competing measures of tracking competitive dynamic in the banking industry, between 2003 and 2013 was on the rise. However, post-2014 it's been shrinking, reflecting increasing industry competition. Net interest margins in 2019 stood at 5.4 percent compared to 6.1 percent and 5.8 percent in 2017 and 2018, respectively. A heterogeneous net interest margins performance is observed across banks with the rate of decline being highest among large banks than small and medium banks (**Figure 16**).

Figure 16: Bank Net Interest Margins



Source: KBA

Figure 17: Interest Incomes and Expenses Evolution



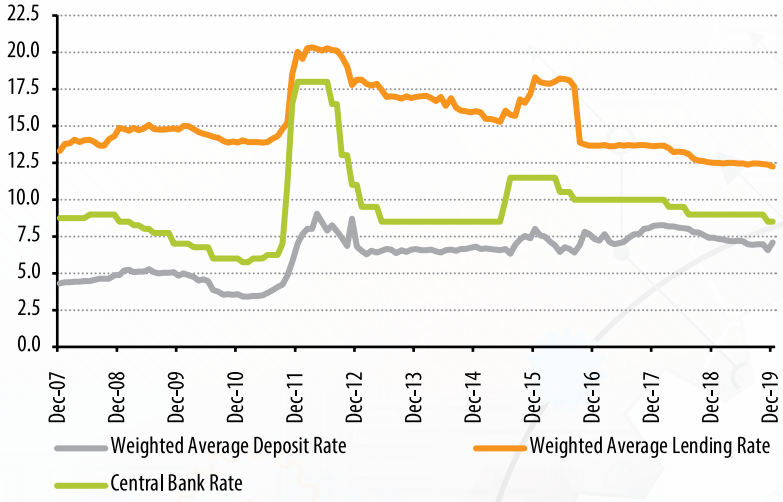
Source: KBA

On the back of the interest margins' evolution is an interplay between interest income and interest expenses, both of which being influenced by the volume and price effect. On the one hand, we observe a continuous increase in incomes generated by other assets and expenses absorbed by deposits. On the other hand, we can observe a continuous decline in the interest revenues from other assets and liabilities and expenses absorbed by deposits **(Figure 17)**. These developments highlight a noticeable shift in the structure of interest income and interest expenses, consequently impacting the observed margin compression.

On the price effect, we see several exogenous elements at play but most notably the influence of monetary policy, specifically how it transmits itself through the credit market. The largely accommodative monetary policy stance that has prevailed since the end of 2012 has been associated with a gradual but sustained reduction in interest rate spreads **(Figure 18)**.

The totality of the financial performance parameters discussed above and the banking industry's adjustments over time and in response to policy and competition dynamics reveals itself in some efficiency indicators but most notably the following four:

Figure 18: Interest Rates Spread



Source: CBK

> On the price effect, we see several exogenous elements at play but most notably the influence of monetary policy, specifically how it transmits itself through the credit market.

Figure 19: Cost-to-Income Ratio

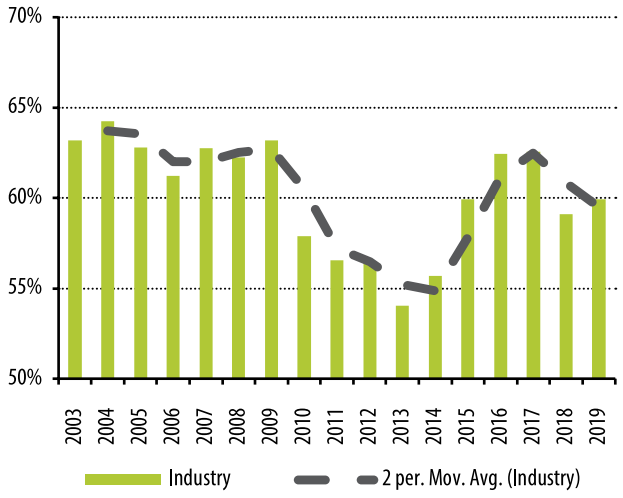
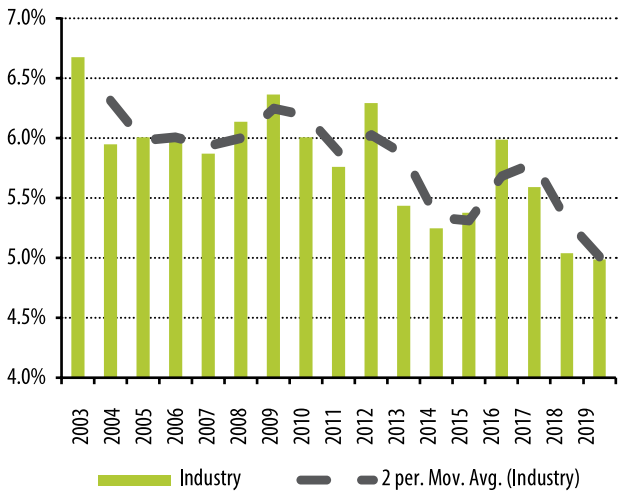


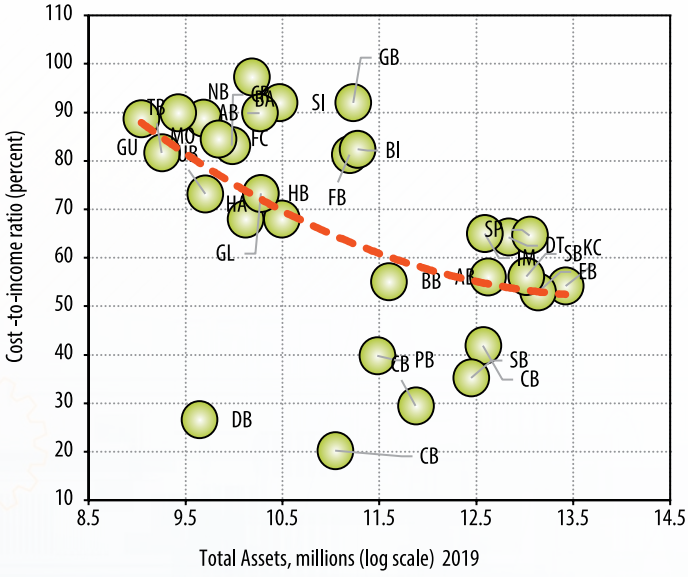
Figure 20: Cost-to-Asset Ratio



Source: CBK

- **One**, the cost-to-income ratio (CIR) and cost-to-assets ratio (CAR). Banks' aggregate cost-to-income and cost-to-assets ratios levelled off in the 2018-2019 period, with their costs absorbing 60 percent of income **(Figure 19)** and 5 percent of assets in 2019 **(Figure 20)**. The efficiency levels vary widely across banks with bigger banks having low cost-to-income ratios relative to small and medium banks, suggesting that there is considerable scope for efficiency improvement among the latter. The observed divergent pattern partly reflects the differences in the business models as well as institutional differences and partly points to the advantages of scale.
- Improvement in a bank's cost-efficiency is related to structural factors. As **Figure 21** shows, the cost-to-income ratio is inversely related to bank size; larger banks tend to be more cost-efficient than smaller banks because of their capacity to spread overheads over a large revenue or asset base. This view is consistent with the hypothesis of scale economies. Closely related with the scale economies concept but conceptually distinct is the fact that on average

Figure 21: Bank Cost-to-Income Ratio and Bank Size



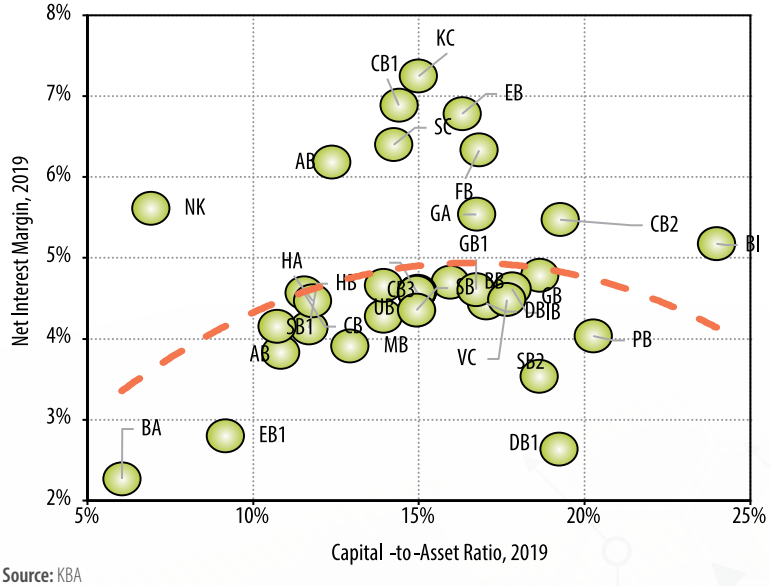
Source: KBA

larger banks tend to operate closer to the production frontier; they have costs incurred over and above the minimum cost necessary to sustain output at a certain level.

- **Two,** the nexus between net interest margins (NIM) and capital to assets ratio (CAR). As **Figure 22** shows, higher capitalisation (a measure of risk-aversion) is compensated by higher margins, albeit non-linearly. That means that beyond a certain threshold, the higher equity-to-asset ratio (EAR) tends to be associated with lower net interest margins. On the one hand, beyond that point, a tradeoff between assuring bank solvency (high capital-to-asset ratios) and lower net interest margins exists. On the other hand, it can be argued thoughthat highly capitalised banks are more solvent and therefore can reduce their funding costs.
- **Three,** the nexus between net interest margin (NIM), bank size and efficiency. The higher the cost-to-income ratio (CIR), the lower the net interest margins, as **Figure 23** shows. Further, as **Figure 24** shows the net interest margins correlate positively with bank size [proxied by the natural logarithm of total assets],

> Higher capitalisation (a measure of risk-aversion) is compensated by higher margins, albeit non-linearly. That means that beyond a certain threshold, the higher equity-to-asset ratio (EAR) tends to be associated with lower net interest margins.

Figure 22: Net Interest Margins and Capital-to-Assets Ratio



Source: KBA

Figure 23 Bank Efficiency and Net Interest Margins

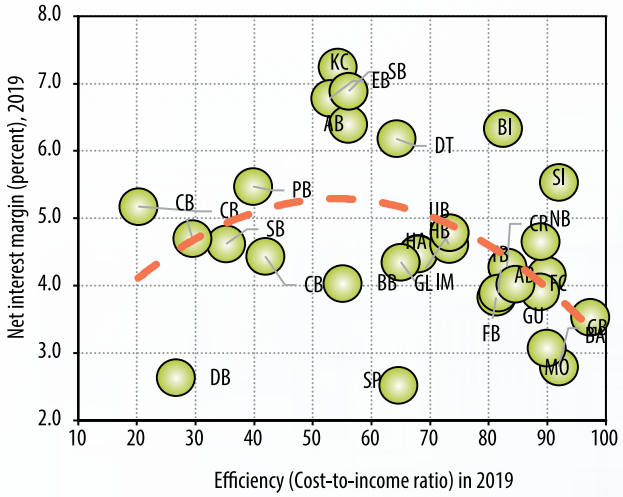


Figure 24: Net-Interest Margins and Bank Size

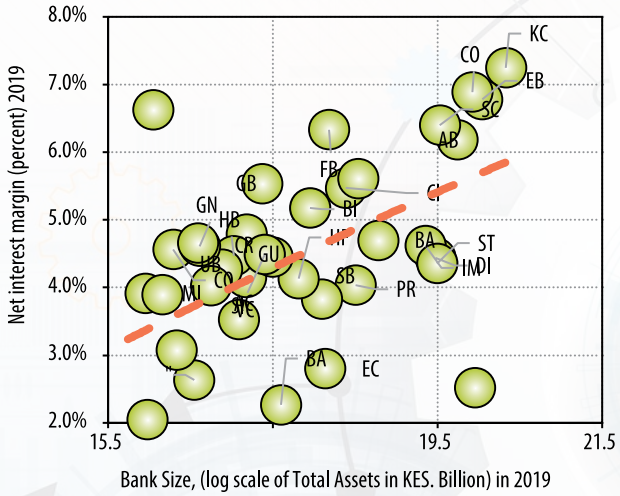


Figure 25: Growth in Profit Before Tax

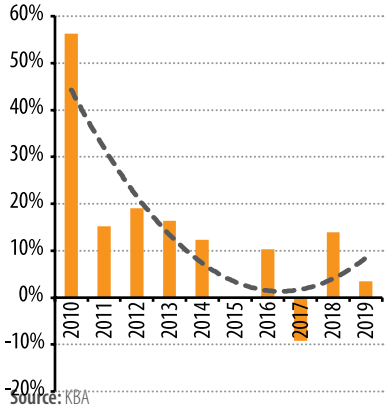


Figure 26: Returns on Equity

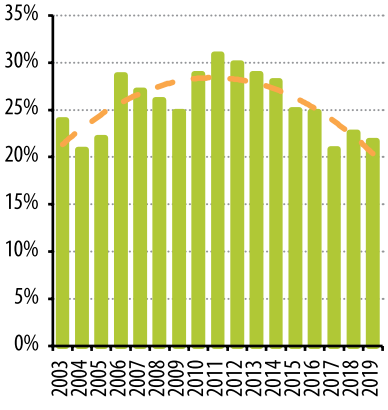
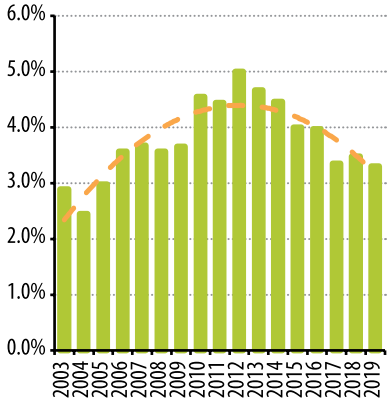


Figure 27: Return on Assets



Source: KBA

attributable partly to the fact that large banks can enhance the public's perception of its credibility and stability; thus depositors are willing to accept lower interest earnings in exchange for perceived safety associated with a bank's size. Similarly, big banks can diversify their activities, allowing them to generate income from other sources besides loans. Furthermore, significant transactions as could be inferred from higher banks' assets enable them to spread the operating costs over a more extensive base, which enables large banks to achieve lower interest spreads.

- **Four,** profit, return on equity (ROE) employed and return on assets (ROA). The banking industry's profit before tax (PBT) grew by 3.5 percent in 2019, representing a 2.3 percent decline compared to the 5.8 percent growth registered in 2018 **(Figure 25)**. The decline is partly due to rising impaired credit quality that is matched by higher provisions, and the marginal increment in the cost-to-income ratio (CIR). Return on capital, a measure of how efficiently shareholder capital is being used to generate profit averaged around 21.7 percent **(Figure 26)** and return on assets (ROA) at 3.30 percent and have notably been falling over the past years **(Figure 27)**.

Figure 28: Return on Assets and Bank Size

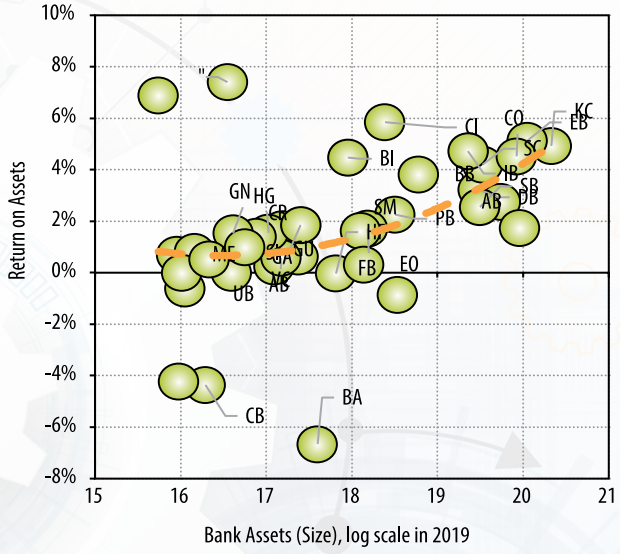
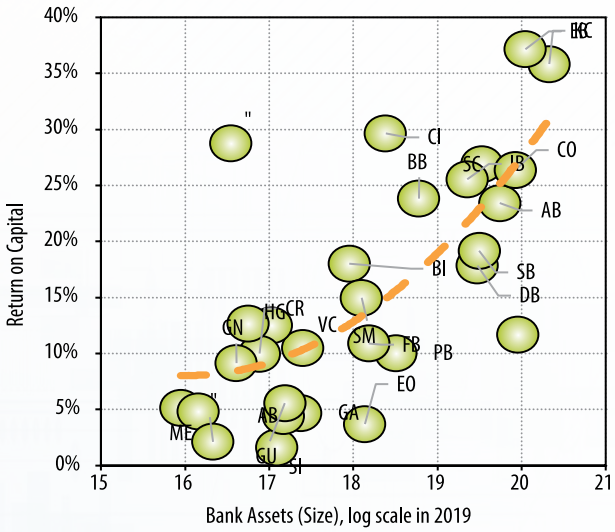


Figure 29: Return on Equity and Bank Size

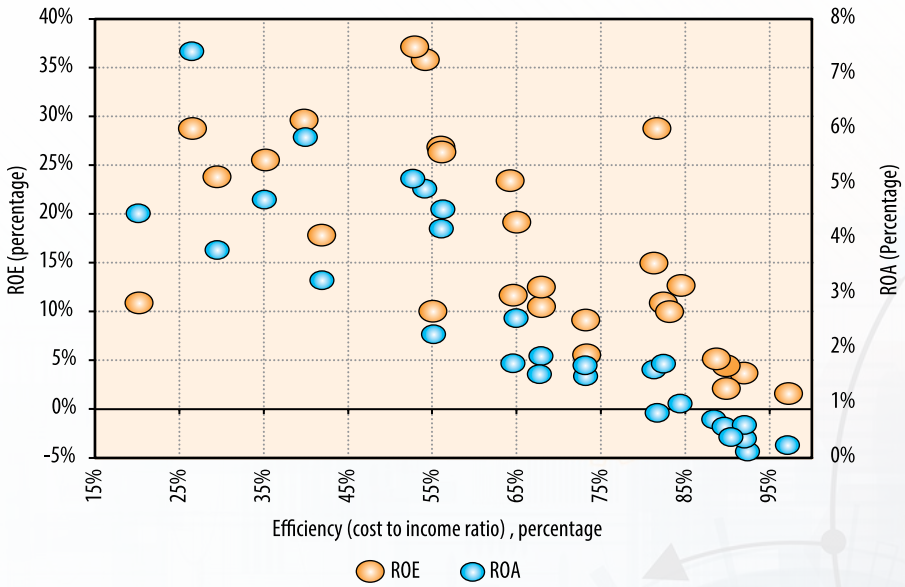


Source: KBA

Controlling for bank size, the relationship between profitability (measured by return on assets) reveals that it is larger banks rather than small and medium banks that were more profitable in 2019 (**Figure 28**). Similarly, larger banks exhibited an advantage in terms of return on capital (**Figure 29**). Overall, these observations support the view that larger operations allow banks to exploit economies of scale, thereby enhancing their profitability.

Further, efficient banks (i.e. banks with lower cost-to-income ratios) have a higher return on assets and capital than less efficient banks (i.e. higher cost-to-income ratio) (**Figure 30**); as a bank's loans and investment in government securities grows so does profitability, taking into account the balancing act that takes cognisance of risk-return tradeoff.

Figure 30: Bank Profitability and Efficiency



Source: KBA

Chapter 5

MARKET STRUCTURE – SERVING US RIGHT?

As the banking industry remains at the fulcrum of economic recovery during and after the COVID-19 pandemic, the state of the market structure remains an issue that still draws debate. As far back as 2014[8], a study commissioned by the Competition Authority of Kenya (CAK) shed some light on the issue but has at the worst remained either ignored in commentary, at best considered non-definitive based on many other studies that have subsequently explored the subject from multiple dimensions.

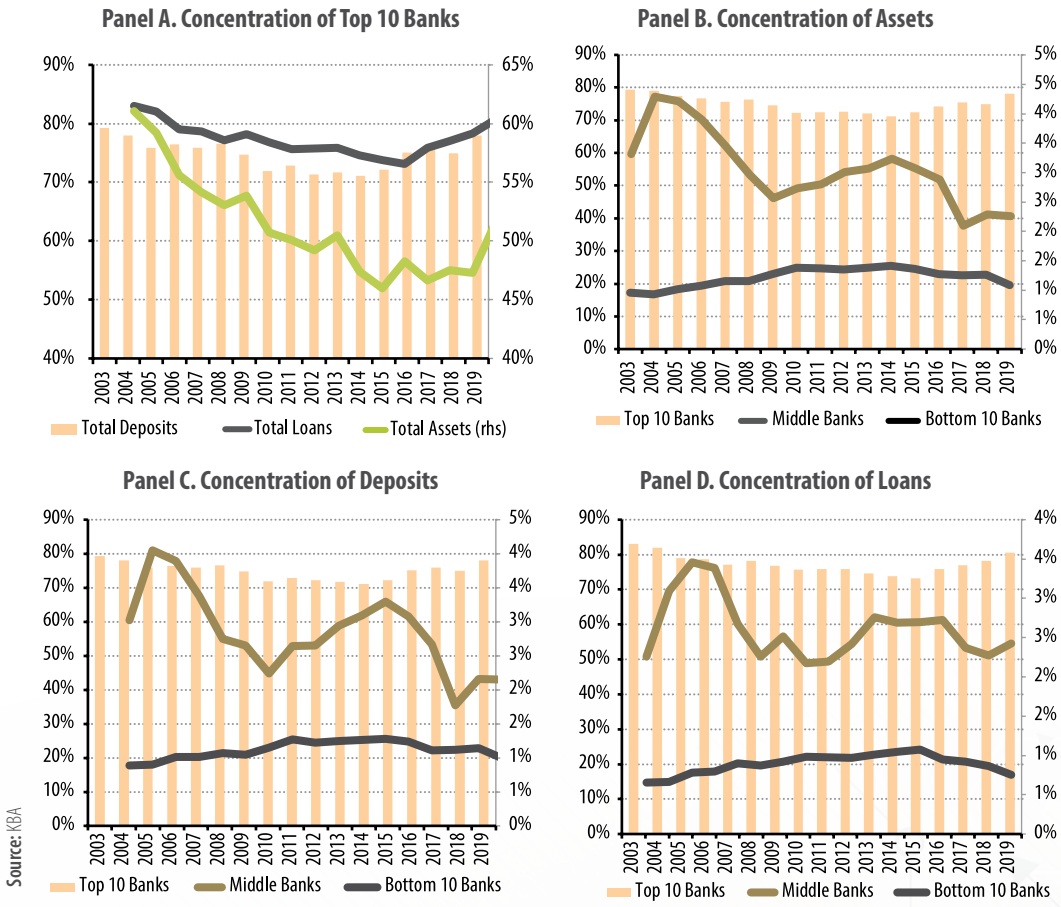
The CAK study highlights three key findings. It asserts that the Kenyan banking industry is generally competitive. It further argues that the widely held concern that high lending rates and high-interest spread are as a result of the market power of dominant banks has not been empirically substantiated. It finally surmises that any proposals for regulating lending rates or interest rate spread are thus not justified by competitive concerns or the market structure.

Recent studies by the *Kenya Bankers Association Centre for Research on Financial Markets and Policy®* revisits the subject of market structure[9] with the analytical anchor being the three measures of competition namely (i) market structure and performance; (ii) regulatory indicators of entry barriers and restriction of bank activities; (iii) empirical measures that gauge the response of output to changes in input prices.

8 CAK (2014), *"Kenyan banking sector study", October. [https://www.cak.go.ke/sites/default/files/Banking%20Sector%20Phase%20I%20Market%20Inquiry-min.pdf]*

9 See highlights here: *https://www.kba.co.ke/downloads/2019%20KBA%20Conference%20Programme%20web.pdf*

Figure 31: Banking Sector Concentration Developments



A two-level assessment of these three measures is undertaken. The first level provides a quick assessment that seeks to debunk the popular debate that the economy has too many banks based on either a simple numerical count or the per capita number of banks; neither of them attempts to ascertain the optimal number of banks. While having too many banks in an economy does not point to the market with enhanced competition, market concentration does not point to a market devoid of competition. We align ourselves with this long-established argument of the tenuous relationship between the extent of market concentration and competition (see, for instance, Nathan and Neave, 1989[10]). We content though that an understanding of the trends in market concentration provides a good entry point into a more in-depth empirical assessment of what the structure means for intermediation efficiency in Kenya.

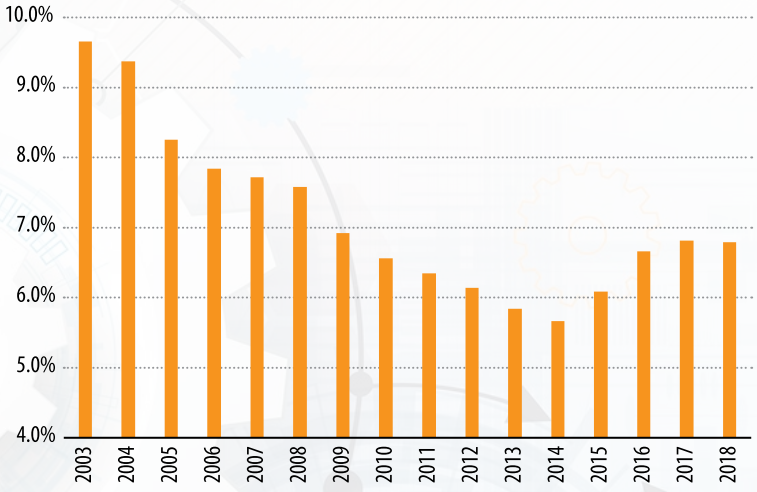
Examining the trends in concentration at the aggregate level - measured by the market share of the top ten largest banks – shows a steady decline, declining from 79 per cent of banking assets, 83 percent of loans and 79 percent of the deposits in 2003 to 71 percent, 74 percent and 71 percent in 2014, respectively. However, starting 2015, it has edged up albeit modestly partly reflecting recent mergers and acquisitions as banks seek to exploit economies of scale.

In 2019, the ten largest banks controlled 78 percent of the banking system's assets, 81 percent of loans and 78 percent of deposits. The graph on the upper right-hand side shows the changes in asset concentration among the middle and bottom ten banks were on the rise between 2003 and 2014 but contracted post-2015, driven by mergers and acquisitions (**Figure 31 -Panel A and Panel B)**. A regularity in deposit and loan concentration is also evident as illustrated in the bottom left and bottom right graph, respectively **(Figure 31 – Panel C and Panel D)**. These developments are a true affirmation of the structural changes witnessed over time.

10 Nathan, A. and Neave, E.H. (1989). "Competition and contestability in Canada's financial system: empirical results". *Canadian Journal of Economics*. Vol. 22(3), pp. 576-594. [https://www.jstor.org/stable/pdf/135541.pdf?casa_token=QSRGRnCwa2YAAAAA:I3FbFDujlgGBq27oREkR3_bRuA5Myt5MY67Vqi1zL-FUy_q4lfzWWYsB1P-Jb87xZPLR8h8Xz_xvxo7cbI2OJ02aqr_Ad3vozlj8SjcuY8JJLU0_4g]

> With the heterogeneous nature of the industry's size-based clusters, concentration positively influences allocation efficiency amongst big banks and cost efficiency and overall efficiency amongst small banks.

Figure 32: Herfindahl-Hirschman Index



Source: Osoro and Kiplangat (2020)

The above picture is confirmed in a recent study (Osoro and Kiplangat, 2020[11]) that tracks the extent of market concentration as measured by the Herfindahl-Hirschman Index (HHI) and indicates that its decline trend from 2003 to 2014 reversed in the subsequent period (**Figure 32**). The study establishes that at the industry level, market concentration has a significant positive influence across all measures of efficiency, implying that economies of scale play into the cost and technical efficiency and consequently allocative efficiency. With the heterogeneous nature of the industry's size-based clusters, concentration positively influences allocation efficiency amongst big banks and cost efficiency and overall efficiency amongst small banks.

There are merits in focusing on the understanding of how any arrangements that could influence the level of market power, such as mergers and acquisitions relates to

11 Osoro J. and Kiplangat J., (2020), "Market Power and Intermediation Efficiency in Kenya: Blind Spots and Empirical Clarity", KBA Centre for Research on Financial Markets and Policy® *Working Paper Series No 39(WPS/01/20)*, May. [https://www.kba.co.ke/downloads/WPS-39-2020.pdf]

intermediation efficiency. As Abdul and Ochenge (2020)[12] posit, mergers and acquisitions have the potential of culminating in a structure that has the dual effect of lowering lending rates and increasing loan supply. The findings of this study point towards the observation that merged banks can benefit from synergy gains and can pass these gains to their customers in the form of reduced lending rates and increased credit availability. Even when that is the case, the study gives a qualification that the possibility of a tradeoff between the efficiency gains of mergers and acquisitions and possible costs of increased market power arising thereof.

The assessment of market power beyond the conventional banking practice entails a consideration of the inevitable partnerships with Financial Technology (FinTech) firms. There is an implicit postulation that the larger market players have a penchant for Fintech deployment in the mainstream intermediation process – savings mobilisation and credit provision – in the process entrenching market power. Taking the period before 2009 as pre-FinTech and subsequently, as post-Fintech, Ndwiga (2020)[13] finds that banks' risk-taking behaviour has a positive association with an increase in market power following the FinTechs' entry.

To the extent that risk-taking behaviour is associated with market competition, it is worth exploring the nexus between competition and banking industry stability in the Kenyan context (Atiti, Agung and Kimani, 2020[14]). The postulation of a negative relationship between competition and bank stability has a weak empirical justification. Nonetheless, a case can be made for vigilance at the regulatory and supervisory environment that ensures stability even as the banking landscape grows increasingly competitive.

But competition is not an end in itself. As Kiemo and Kamau (2020)[15] establish, banks have scope to optimise their scale of operations to shift towards increasing returns to scale, as well as gain from improving their efficiency. The changes in market power over time, the study asserts, seems to favour efficiency and competition gains in the industry.

Based on the foregoing, market power doesn't come at the expense of competition. The competitive gains arising thereof have enhanced the pursuit for efficiency. Ultimately, the market-driven change in structure is increasingly supporting the improvement in the Kenya banking system's intermediation efficiency.

12 Abdul F. and Ochenge R., (2020), "Do Mergers and Acquisitions Impact Bank Lending Behavior in Kenya?", KBA Centre for Research on Financial Markets and Policy® *Working Paper Series No 39(WPS/07/20)*, May. [https://www.kba.co.ke/downloads/WPS-45-2020.pdf]

13 Ndwiga D. (2020), "The Effects of FinTechs on Bank Market Power and Risk Taking Behaviour in Kenya", KBA Centre for Research on Financial Markets and Policy® *Working Paper Series No 39(WPS/06/20)*, May. [https://www.kba.co.ke/downloads/WPS-44-2020.pdf]

14 Atiti F. Agung, R. and Kimani S., (2020), "Competition and Banking Sector Stability in Kenya", KBA Centre for Research on Financial Markets and Policy® *Working Paper Series No 39(WPS/03/20)*, May. [https://www.kba.co.ke/downloads/WPS-41-2020.pdf]

15 Kiemo, S. and Kamau A. (2020), "Banking Sector Competition and Intermediation Efficiency in Kenya", KBA Centre for Research on Financial Markets and Policy® *Working Paper Series No 39(WPS/04/20)*, May. [https://www.kba.co.ke/downloads/WPS-42-2020.pdf]

Chapter 6

CREDIT MARKET DYNAMICS AND THE ECONOMY – A GOOD GUIDE FOR GROWTH EXPECTATIONS?

As observed in Chapter 1, the focus on the banking industry as one of the pillars for the economy's recovery following the COVID-19 related meltdown is hinged on the argument that finance plays an important role in economic growth. The notional finance and economic growth relationship is presumed to be positive, and many studies have confirmed that relationship with the causal relationship in some instances being bi-directional.

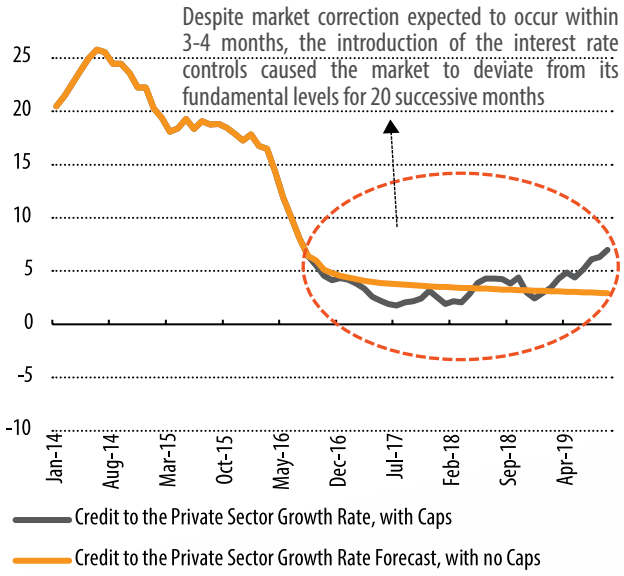
But there are nuances, for the relationship could be influenced by the level of development of both the economy and the financial system on the one hand, and the association between the monetary cycle, the business cycle and the financial cycle. The predictive power of the monetary cycle, financial cycle and business cycle junction has been demonstrated in theoretical constructs that draw a line that links the trio (Adrian, Estrella, and Shin, 2010)[16].

The logic in this argument is that monetary tightening (easing) is associated with a flattening (widening) of the term spread as it leads to a reduction (increase) in net interest margin, which in turn makes lending less (more) profitable, leading to a contraction (expansion) in the supply of credit. To the extent that this logic is persuasive, then the easing cycle of monetary policy in Kenya from June 2016 ought to have made its way through the system towards credit expansion.

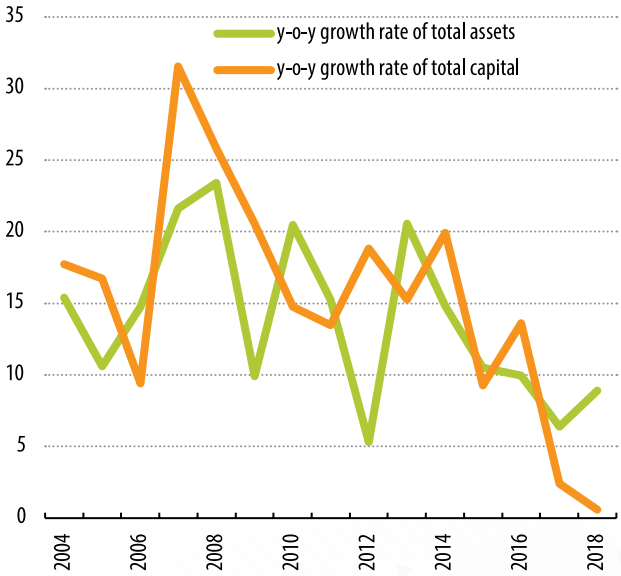
16 Adrian, T., Estrella, A., & Shin, H. S. (2010). Monetary cycles, financial cycles and the business cycle. *Federal Reserve Bank of New York Staff Report,* (421). [https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1532309]

Figure 33: Credit Market Distortion

A. Impact of distortions on private sector credit (% change)



B. Total assets and capital growth on a decline (%)



Source: KBA compilations (2020); CBK

But that was never the case owing to the distortionary interest rate controls that prevailed from September 2016 to November 2019. Despite private credit growth being on a decline since 2014, it remained above its 'fundamental' trajectory until around April 2016 before deviating from its equilibrium position **(Figure 33)**[17].

The deviation in credit growth would have closed after three months after September 2016, the period after the introduction of interest rate controls. However, the deviation amplified and continued to widen in 2017; based on the fundamentals, and in the absence of controls, the private sector credit growth would have been 1.04 percentage points higher than pre-capping period.

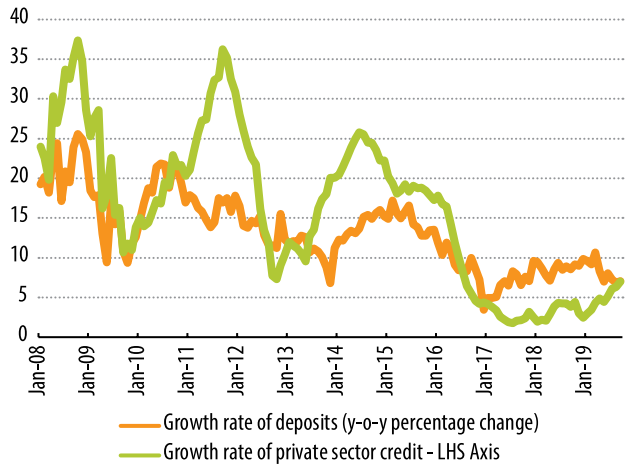
Further evidence of the distortionary effect of interest rates control is seen in the interaction between bank deposits and credit to the private sector**.** The private sector credit mirrors the evolution of deposits with the slump in credit to the private sector following the reduction in deposit growths **(Figure 34)**.

Private sector credit growth has a strong positive association with growth in deposit base, albeit with a lag such that is a rise (decline) in the rate of growth of deposits is followed by a rise (decline) in credit growth. However, with policy distortions – the introduction of the interest rate capping law in September 2016 - the link between deposits and credit broke as the growth of deposits ought to have been accompanied by growing private sector credit.

The aforementioned distortionary effects have implications on the extent to which the banking system influence the economy's output performance. The feedback loop that runs from the asset quality that – as evaluated in Chapter

17 This analysis is based on an Autoregressive Integrated Moving Average (1,1,1) model popularly known as Box-Jenkins method. Under this model, emphasis on analyzing the stochastic properties allowing the growth credit to the private sector to be explained by its own past or lagged values; we adopt a univariate ARIMA model which allows the path of credit to mimic its history.

Figure 34. Nexus between Private Sector Credit and deposits



Source: KBA compilations (2020); CBK

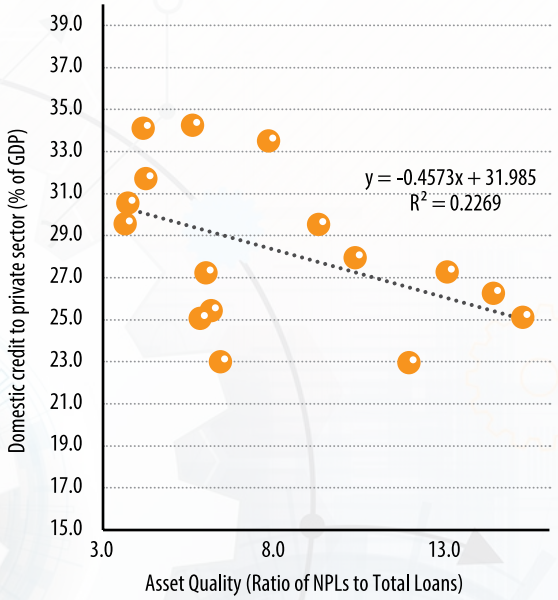
3 – has in the recent years been elevated and has tended to influence the risk-taking attitudes and therefore credit allocation, which then influences output growth; the loop then runs back to the banking system.

As **Figure 35** shows, asset quality deterioration is evidently associated with private sector credit contraction as it is often associated with increasing bank funding costs (**Panel A**). In recent years, the build-up in non-performing loans (NPLs) has been on account of the continued accumulation of unpaid domestic arrears, typically to suppliers.

Elevated non-performing loans exacerbate vulnerabilities on the economy. As **Figure 35** (**Panel B**) shows a higher NPLs ratio is associated with economic contraction. The slowdown in private sector credit growth due to rising NPLs is a concern especially in an situation where fiscal space is constrained and as Government continues to rely heavily on commercial banks to carry the rising public debt crowds out the private sector.

Figure 35: Feedback Loops from the Financial Sector to the Real Economy

Panel A. Declining Asset Quality is Associated with Tapering Private Sector Growth



Panel B. Deteriorating Asset Quality Affects Economic Growth Adversely

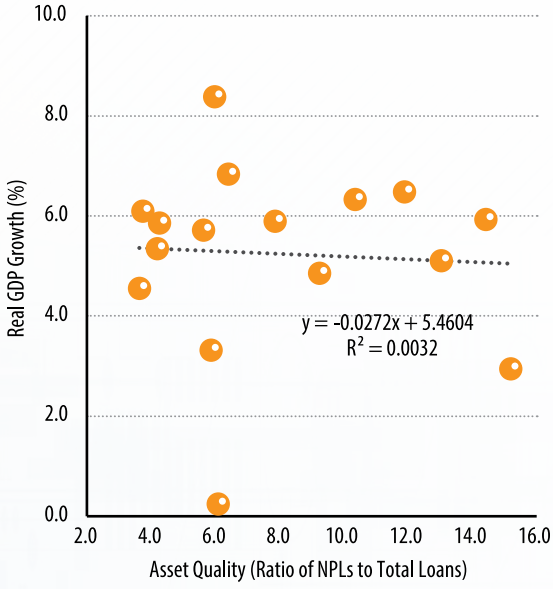
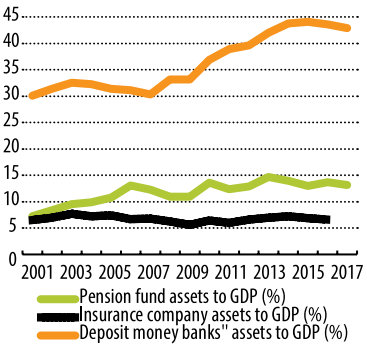


Table 2: Trends of Real and Financial Sector Development Indicators in Kenya

	Domestic Credit Provided by Financial Sector	Domestic Credit to Private Sector By Banks	Credit to Government and SOEs	Bank Credit to Bank Deposits	Deposits to GDP	GDP Growth
1971-1980	25.43	18.60	2.55	76.86	15.66	8.18
1981-1990	34.27	19.36	3.85	80.68	16.01	4.08
1991-2000	36.41	22.77	6.55	74.79	23.41	1.88
2001-2010	36.48	25.21	10.24	76.98	29.56	4.35
2011-2018	42.61	31.32	13.08	85.47	34.80	5.59

Notes: All figures are reported as a percentage of GDP except bank credit to bank deposits which is a ratio and GDP growth in percentage, SOEs = State Owned Enterprises

Figure 36: Financial Industry Assets to GDP (%)



Source: WDI (2019) database, GFDD (Oct. 2019), KBA Compilations (2020)

A brief examination of the two factors that anchor the finance-growth nexus in the context of Kenya – the growth evolution path and the extent of financial sector depth – point to the following:

- **One**, the evolution of Kenya's GDP growth over the past five decades can generally be characterised into five distinct episodes **(Table 2)**. First, the impressive growth of the 1970s despite the 1973 oil shocks which was more than compensated by the 1979 coffee boom. Second, the relative deceleration in the 1980s. Third, despite substantial economic reforms the sluggish 1990s growth. Fourth, the modest recovery in the 2000s, and lastly, the sustenance of an upward growth trend into the 2010 – 2020.

- **Two**, the economy's financial system continues to be bank-dominated **(Figure 36).** For much of the 2001 – 2010 period, the banking system assets as a ratio of GDP was in the 30 percent to 35 percent range, rising to 42.88 percent by 2017. The other indicators of financial system development though relatively under-developed complement the intermediation role play by the banking system (see, for instance, Osoro and Osano, 2014[18]).

On the back of these two factors, the interaction between the business cycles and financial cycles in the Kenyan context depicts the typical attributes of the latter having high amplitudes and long durations than the former (see Osoro and Kiplangat[19], and **Figure 37**). The interaction isinformative of how the behaviour of the credit market can influence the growth outcomes of an economy.

There is an established finding that when economic slowdown has a connection with episodes financial disruption, such slowdown can be prolonged (Claessens, Kose and Terrones, 2012[20]). By implication, any positive developments in addressing the financial disruptions

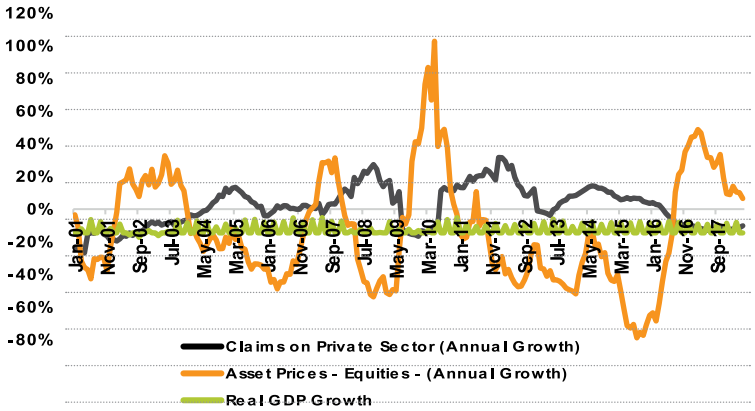
> There is an established finding that when economic slowdown has a connection with episodes financial disruption, such slowdown can be prolonged.

18 Osoro J and Osano E. (2020), "Bank-based Versus Market-based Financial System: Does Evidence Justify the Dichotomy in the Context of Kenya?", KBA Centre for Research on Financial Markets and Policy® *Working Paper Series No (WPS/04/20)*, December. [https://www.kba.co.ke/downloads/Working%20Paper%20WPS-10-14.pdf]

19 Osoro J and Kiplangat J. (2019), "Credit Market Imbalances and Adjustments in Kenya", KBA Centre for Research on Financial Markets and Policy® *Working Paper Series No (WPS/01/19)*[https://www.kba.co.ke/downloads/WPS-01-2019.pdf]

20 Claessens, S., Kose M. A., and Terrones, M. E. (2012), "How Do Business and Financial Cycles Interact? ", *Journal of International Economics*, 87(1), pp. 178 – 190, May. [working paper version is here: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.636.8068&rep=rep1&type=pdf]

Figure 37: Financial and Economic Cycles in Kenya



Source: Osoro and Kiplangat (2020)

– whether they are emanating from economic shocks as is the case under COVID-19 or from financial sector disturbances such as was seen in Kenya's banking sector during the 2015 – 2016 period - will culminate in strong economic recovery.

The importance of the developments in the credit market for the real economy as analysed above motivates revisiting the finance- growth nexus in the context of Kenya. While there is an *ex-ante* possibility of a bi-directional relationship, a causality test reveals a unidirectional causality that runs from financial sector development to economic growth **(Table 3)**, a finding consistent with extant studies conducted in Kenya (see Odhiambo, 2008; WoldeRufael, 2009; and Uddin, Sjo and Shahbaz, 2013) [21].

Table 3: Finance-Growth Nexus Granger Causality

Optimal Lag	Null Hypothesis:	Obs	F-stat	Prob.
1	H_0: GDP does not Granger-cause Credit to the Private Sector	32	7.07	0.01**
1	H_0: Credit to the Private Sector does not Granger-cause GDP	32	3.62	0.06

Notes: (**) denotes the rejection of the hypothesis at 5% significance and thus implies there is causality between the variables

21 See Odhiambo, N. M. (2008). Financial Depth, Savings and Economic Growth in Kenya: A Dynamic Causal Linkage. *Economic Modelling, 25*(4), 704-713. [https://www.sciencedirect.com/science/article/pii/S0264999307001204]

Wolde-Rufael, Y. (2009). Re-Examining the Financial Development and Economic Growth Nexus in Kenya. *Economic Modelling, 26*(6), 1140-1146. [https://www.sciencedirect.com/science/article/pii/S0264999309000790]

Uddin, G. S., Sjö, B., & Shahbaz, M. (2013). The Causal Nexus between Financial Development and Economic Growth in Kenya. *Economic Modelling, 35*, 701-707. [https://www.sciencedirect.com/science/article/pii/S0264999313003477]

The outlined causal insight points to the possibility that the financial sector is supply-leading as opposed to demand-following and thus is likely to impact growth by acting as a productive input. As such, any policy distortions faced by the sector would cause a contraction in economic growth.

A further empirical analysis using econometric techniques (see **Box 1**) reveals that net domestic credit to the private sector exerts a positive and significant impact on economic growth further supporting the view that financial sector development ignites economic growth.

The effect of net domestic credit to the private sector on economic growth ranges between ranges from between 0.078 to 0.196 depending on the specification adopted. This implies that a 10-percentage point increase in credit to the private sector would be associated with between 0.78 and 1.96 percentage point increase in economic growth. First, this is in line with the finding of, Uddin, Sjo, and Shahbaz (2013)22 which show that a 10-percentage point increase in financial sector development is associated with a 0.39 percentage point increase in economic growth in the long-run and 0.11 percentage point increase in the short-run. Second its in tandem with that of the Central Bank of Kenya (CBK, 2018)[23] that also establishes that the response of a one percentage point increase of credit would result in between 0.11 and 0.17 percentage point increase economic growth. Lastly, it augurs well with that of an International Monetary Fund (IMF) study by [see Alper, Clements, Hobdari and Moya, 2019 [24]] that finds that it is associated with a 0.07 to 0.15 percentage point increase in economic growth.

Based on these elasticities, we estimated that the decline in the net domestic credit to the private sector is associated

22 See Uddin, G. S., Sjö, B., & Shahbaz, M. (2013). The Causal Nexus between Financial Development and Economic Growth in Kenya. *Economic Modelling, 35*, 701-707. [https://www.sciencedirect.com/science/article/pii/S0264999313003477]

23 see CBK (2018), "The Impact of Interest Rate Capping on the Kenyan Economy." [https://www.centralbank.go.ke/wp-content/uploads/2018/03/Summary-of-the-study-on-Interest-rate-Caps_February-2018.pdf].

24 Alper, E., Clements, B., Hobdari, N., & Moya Porcel, R. (2019). Do Interest Rate Controls Work? Evidence from Kenya. *Review of Development Economics*. [https://onlinelibrary.wiley.com/doi/abs/10.1111/rode.12675]

with a 0.79 to 1.7 percentage point reduction in economic growth. We acknowledge that this reduction is not entirely attributable to the contraction in private sector credit as other factors could also potentially be at play. We nonetheless argue that the reduction exacerbated the contraction in economic growth

Box 1: Finance- Economic Growth Nexus revisited

Regression specifications. We estimate an econometric model of the finance and growth nexus augmented with auxiliary regressors based on the standard growth determinants and other indicators of the financial system. The baseline specification is as follows:

$$g(t) = y(t)-y(t-1) = \alpha+\beta_i f(t)+C(t)\ \gamma_i+\varepsilon(t)$$

Description of variables and data sources. $g(t)$ is the economic growth rate, $y(t)$ is the log of Gross Domestic Product at current market prices and $y(t-1)$ is its lagged term.

The choice of the conditioning variables reflects the standard neoclassical growth theory augmented credit market conditions indicators.

$f(t)$ is an indicator of financial sector development. Whereas the measurement of financial sector development is complex, different proxies have been adopted in the literature among them the ratio of M2 or M3 to nominal GDP. However, this measure is not without limitations as it reflects the extent of transaction services provided by the financial system rather than the ability of the financial system to channel funds from depositors to investment opportunities.

We proxy financial sector development by the net domestic credit to the private sector. The choice of the indicator is motivated by the fact that Kenya's financial system is bank dominated, that is most Kenyan companies are non-listed at the securities exchange. Thus, it is more plausible that sources of financing are mainly from banks. In this regard, the use of a bank-based proxy for financial sector development is more appropriate.

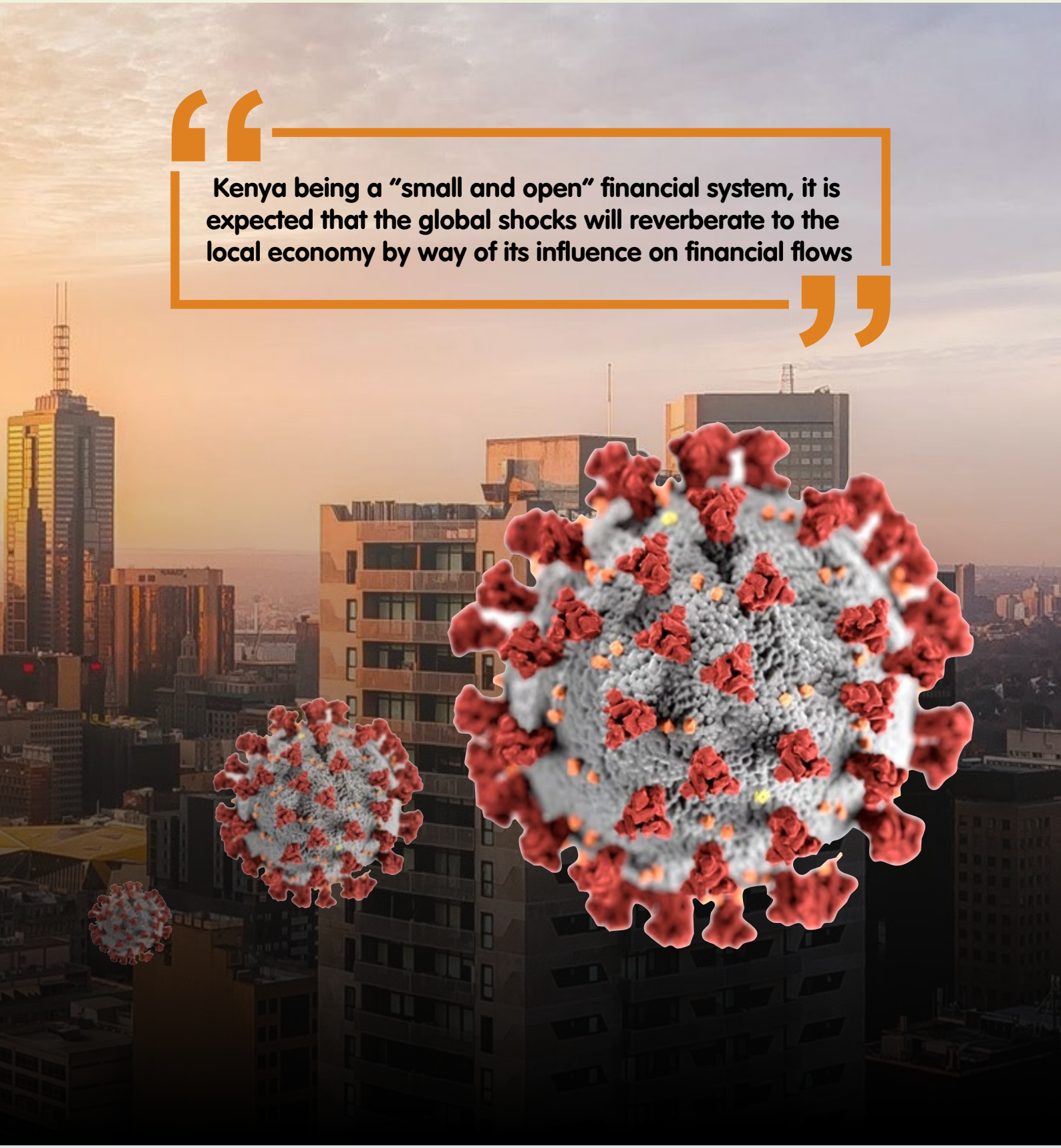
β_i is the parameter of interest capturing the effect of growth in the credit to the private sector on economic growth and α is the constant term.

$C(t)$ is a vector of other conditioning variables and is made up of gross fixed capital formation, general government final consumption expenditure, a proxy for government size, trade openness measured as the ratio of the sum of imports and exports to gross domestic product, inflation rate, real lending rate, 1-year LIBOR rate and the VIX index to capture for credit market conditions.

$\varepsilon(t)$ is the error term which is assumed to be independent and identically distributed (iid).

The data used in the estimation is obtained from the World Development Indicators (WDI) Database of World Bank for the period 1980–2018.

Equation (1) is estimated using the Error Correction model and the bivariate vector autoregressive (VAR) model. The results of these estimations are presented in the appendix.


Kenya being a "small and open" financial system, it is expected that the global shocks will reverberate to the local economy by way of its influence on financial flows

Chapter 7

OUTLOOK

The inevitable focus on the state of the banking industry is premised on the platform that it provides for economic recovery. It is obvious the global developments regarding the economic impact of the COVID-19 pandemic has spilled over to the local environment, in the process exacerbating the domestic and external imbalances.

Kenya being a "small and open" financial system, it is expected that the global shocks will reverberate to the local economy by way of its influence on financial flows. Arguably, the reverse influence is limited. That, therefore, points to the feedback loops concentrating at the local level, mainly being from economy to financial markets and back to the economy.

It is acknowledged that addressing an economic slowdown with the financial fragility is challenging compared to an initial condition where the epicentre of weakness is not the financial system. As the *State of the Banking Industry Report* for 2020 shows, even amidst conditions that have affected balance sheet growth and asset quality, the Kenyan banking system remains sufficiently capitalised.

The implication of the capital sufficiency with adequate buffers means that the banking industry, which demonstrably dominates the Kenyan financial system, has remained a key line of defence in the economy when it comes to responding to the current economic slowdown. The process of loan restructuring to support struggling businesses is a critical part of that response. The prudential regulatory support necessitates that such a response is possible while preserving systemic stability.

The banking industry's broader response function will be revealed in how under the conditions of constrained borrowers seeking accommodations on their existing obligations, and deteriorating asset quality, banks will view credit expansion going forward. Going by the nexus that this report has established between credit expansion and economic growth, the anticipated subdued growth in private sector credit – both from a demand and supply viewpoint – implies that limited growth momentum will be from private sector credit.

On the backdrop of the outlined picture, it is anticipated that the market-driven change in the structure of the banking industry with the attendant implication on market power will continue. Our analysis indicates that any changes in market power arising from mergers and acquisitions doesn't come at the expense of competition. The competitive gains arising thereof have enhanced the pursuing for efficiency.

APPENDICES

Appendix 1:

Table 4: Long-Run and Short-Run Dynamics - Engle-Granger Error Correction Model Estimates

Panel A. Long-Run Estimates

Variables	GDP (Natural Logarithm)
Net Domestic Credit (Natural Logarithm)	0.196***
	(0.095)
Gross Fixed Capital Formation (Natural Logarithm)	0.111
	(0.083)
General Government Final Consumption Expenditure (Natural Logarithm)	0.546***
	(0.104)
Inflation Rate, Annual (%)	0.004***
	(0.001)
Trade Openness (%)	-0.0001
	(0.001)
LIBOR Rate, Annual (%)	0.016**
	(0.006)
VIX Index (Natural Logarithm)	-0.001
	(0.002)
Constant	0.012
	(0.454)
N	**33**

Panel B. Short-Run Estimates

Variables	GDP (Natural Logarithm)
Δ Net Domestic Credit (Natural Logarithm)	0.078
	(0.093)
Δ Gross Fixed Capital Formation (Natural Logarithm)	0.269**
	(0.124)
Δ General Government Final Consumption Expenditure (Natural Logarithm)	0.576***
	(0.146)
Δ Inflation Rate, Annual (%)	0.003***
	(0.001)
Δ Trade Openness (%)	-0.003
	(0.002)
Δ LIBOR Rate, Annual (%)	0.003
	(0.006)
Δ VIX Index (Natural Logarithm)	-0.002
	(0.001)
Error Correction Term	-0.462**
	(0.196)
Constant	0.015
	(0.017)
N	**32**

Standard errors in parentheses. + $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Bivariate Vector Autoregressive (BVAR) Estimates

Panel A. Gross Domestic Product Determination Model

Variables	GDP (Natural Logarithm)
GDP at Current Market Prices (Natural Logarithm)	0.978***
	(0.223)
Net Domestic Credit (Natural Logarithm)	0.111**
	(0.139)
Gross Fixed Capital Formation (Natural Logarithm)	-0.049
	(0.111)
General Government Final Consumption Expenditure (Natural Logarithm)	-0.259
	(0.179)
Inflation Rate, Annual (%)	-0.004+
	(0.003)
Trade Openness, (%)	0.006***
	(0.002)
Libor Rate, (%)	0.009
	(0.008)
VIX Index, (Natural Logarithm)	-0.003**
	(0.001)
Real Lending Rate, (%)	-0.005**
	(0.002)
Constant	0.221
	(0.495)
N	**32**

Panel B. Net Domestic Credit Determination Model

Variables	Net Domestic Credit (Natural Logarithm)
GDP At Current Market Prices, (Natural Logarithm)	-0.046
	(0.219)
Net Domestic Credit, (Natural Logarithm)	0.178**
	(0.136)
Gross Fixed Capital Formation, (Natural Logarithm)	0.562***
	(0.109)
General Government Final Consumption Expenditure, (Natural Logarithm)	0.209
	(0.175)
Inflation Rate, First Lag Annual (%)	0.008***
	(0.003)
Trade Openness, (%)	0.001
	(0.002)
LIBOR Rate, Annual (%)	-0.023***
	(0.008)
VIX Index, (Natural Logarithm)	-0.001
	(0.001)
Real Lending Rate, (%)	0.008***
	(0.002)
Constant	0.613
	(0.484)
N	**32**

Standard errors in parentheses. + $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Selected Balance Sheet and Profit & Loss Indicators

							Kes. Billion
	2013	2014	2015	2016	2017	2018	2019
Balance Sheet							
Total Assets	2,559	3,002	3,354	3,727	4,003	4,398	4,801
Total Liabilities	2,145	2,527	2,931	3,128	3,359	3,722	4,072
Net Assets (Shareholders' Fund)	414	478	537	597	644	677	729
Customer Deposits	1,831	2,146	2,467	2,637	2,900	3,255	3,527
Other Deposits	106	129	142	120	126	98	100
Total Deposits	1,938	2,275	2,609	2,756	3,026	3,353	3,627
Loans and Advances to Customers (Net of Provision)	1,453	1,778	2,073	2,203	2,273	2,312	2,488
Total Loans and Advances to Customers	1,500	1,837	2,147	2,317	2,417	2,462	2,668
Cash and Balances with CBK	123	167	196	162	161	249	259
Placements with other Banks	144	133	147	114	167	200	215
Profit and Loss Account							
Income Sources							
Interest on Loans and Advances	195	228	274	303	265	265	264
Interest on Government Securities	55	59	67	90	103	119	122
Interest on Placements and Bank Balances	5	5	10	7	5	5	8
Other Interest Income	2	2	2	3	1	1	1
Total Interest Income	257	294	353	402	374	380	396
Foreign Exchange Gain (Loss)	20	19	23	25	26	28	31
Fees and Commissions Income (Net)	52	60	66	66	71	73	86
Other Operating Income	12	18	10	17	16	20	23
Total Net Operating Income	257	283	301	357	358	375	399
Expense Components							
Interest on Deposits	66	78	114	114	106	117	115
Interest on Borrowed Funds, Deposits, and Placement from Other Banks	5	6	8	9	9	9	8
Other Interest Expense	6	8	11	13	13	12	13
Total Interest Expense	76	90	131	136	130	138	137
General Administrative Expenses	93	107	129	158	161	151	163
Other Operating Expenses	48	53	57	64	63	71	76
Total Operating Expenses	139	158	180	223	224	222	239
Operating Profits Before Provisions	125	138	136	149	134	153	164
Losses On Loans and Advances	12	16	27	44	42	31	39
Profits Before Tax (After Exceptional Items)	119	134	134	148	134	153	158

							Kes. Billion
	2013	2014	2015	2016	2017	2018	2019
Disclosures							
Total Provisions (Loan Loss Provision and Interest in Suspense)	47	59	74	114	145	151	180
Non-Performing Loans Net of Provisions and Suspense Interest	32	45	72	101	120	143	138
Total Non-Performing Loans (Net of Interest in Suspense)	63	76	121	179	221	257	270
Realizable Value of Securities	29	42	67	96	110	131	131
Net NPL Exposure	3	3	5	5	9	12	7
Total Insider Loans	71	81	90	102	99	105	103
Core Capital	325	391	441	524	547	581	631
Supplementary Capital	75	104	106	89	75	50	84
Total Capital	378	471	520	603	621	630	714
Total Risk Weighted Assets	1,894	2,455	2,813	3,102	3,324	3,503	3,729
Selected Performance Ratios (%)							
Total Liabilities/ Total Assets	83.8%	84.2%	87.4%	83.9%	83.9%	84.6%	84.8%
Shareholders' Funds/ Total Assets	16.2%	15.9%	16.0%	16.0%	16.1%	15.4%	15.2%
Net Interest Margin/ Total Assets	7.1%	6.7%	6.6%	7.1%	6.1%	5.8%	5.4%
Total Deposits/ Total Assets	75.7%	75.8%	77.8%	74.0%	75.6%	76.2%	75.5%
Total Advances/ Total Deposits	77.4%	80.8%	82.3%	84.0%	79.9%	73.4%	73.6%
Shareholders' Funds/ Total Deposits	21.4%	21.0%	20.6%	21.6%	21.3%	20.2%	20.1%
Return On Assets (ROA)	4.7%	4.5%	4.0%	4.0%	3.4%	3.5%	3.3%
Return On Equity (ROE)	28.8%	28.0%	25.0%	24.8%	20.8%	22.6%	21.7%
Average Cost of Funds (COF)	2.1%	2.0%	2.6%	2.4%	2.1%	2.2%	2.0%
Cost Income Ratio (CIR)	40.8%	40.3%	39.9%	43.8%	46.0%	43.5%	44.7%

Source: KBA Financial Database

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