

Tailoring Basel III Framework to Banking Risks in Africa: A Comparative Analysis of South Africa and Kenya

Yered S. Fandohan

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Abstract

Banks, particularly through their financial intermediation activities—including deposit-taking and lending—play an essential role in financing and supporting the proper functioning of the economy. To preserve financial stability, it is therefore essential to establish prudential rules designed to ensure banks' resilience and their ability to absorb potential shocks. However, how can regulators ensure that the rules they establish are relevant, effective, and appropriately calibrated to the actual risks to which banks are exposed? The 2008 financial crisis revealed several major vulnerabilities within the global banking system. In its aftermath, and in response to the weaknesses identified, the Basel Committee on Banking Supervision developed the Basel III framework, notably strengthening capital, liquidity, and risk management requirements. Since then, the stress-testing exercises to which banks are regularly subjected have provided a means of assessing their ability to withstand severe economic and financial scenarios and have contributed to evaluating their overall resilience. Through a comparative analysis of South Africa and Kenya, this study seeks to demonstrate that optimal prudential calibration should primarily reflect the level and nature of the risks actually borne by each banking system. The key issue therefore lies not solely in the uniform implementation of an international prudential framework or in simply raising regulatory requirements, but also in adapting these requirements to the specific characteristics and risk profile of each banking environment.

Keywords : Basel III, Prudential Supervision, Banking Resilience, Credit Risk, Non-Performing Loans, Capital Requirements, Prudential Calibration, Cost of Capital, Kenya, South Africa.

JEL Classification : G21, G28, G32.

Key messages

- Banking risks vary significantly across economic environments and require differentiated prudential responses.
- Higher underlying credit risk may justify more conservative regulatory capital requirements.
- Basel III provides a common prudential framework, but uniform implementation does not necessarily ensure optimal resilience.
- Optimal prudential calibration should reflect the actual risk profile of each banking system.
- Higher capital requirements strengthen resilience but generate an economic cost that varies across banking environments.
- Effective prudential regulation requires balancing banking resilience, the economic cost of capital, and competitiveness.

Introduction

Banks play a major role in financing and supporting economic activity through their various functions. They constitute one of the main channels through which economic agents are financed, notably by providing loans to households, businesses, and public-sector entities. In this context, banks are exposed to a major risk: credit risk, namely the risk that counterparties fail to repay loans granted to them or otherwise fail to meet their financial obligations.

Credit risk was one of the key factors underlying one of the most significant financial crises of modern times: the 2008 subprime crisis, when a large number of households became unable to repay mortgage loans granted by U.S. banks. Yet, the United States was not necessarily regarded as an economy in which widespread household defaults were expected, particularly given the level of development and sophistication of its financial system.

In the aftermath of the crisis, regulators sought to ensure that banks had greater capacity to absorb losses, particularly those arising from credit risk. Among other measures, this led to a strengthening of capital requirements through reforms to the Basel framework and the introduction of Basel III. However, given that credit risk varies across economic environments, can the implementation of Basel III requirements—or simply imposing higher capital requirements—be sufficient to mitigate the impact of such risk on bank resilience?

This question lies at the heart of our study. Focusing on South Africa and Kenya, and against the broader backdrop of the implementation of the Basel framework across numerous jurisdictions worldwide—including the European Union, the United States, China, and the United Kingdom—this study examines the calibration of prudential regulation within banking systems exposed to comparatively higher levels of financial risk.

Through the analysis of these two countries, we seek to determine whether the implementation of Basel III standards or a simple increase in capital requirements is sufficient to make banking systems resilient to the structural risks arising from their operating environment. To address this question, our study is structured into several sections. First, we examine how the subprime crisis affected African economies more broadly, as well as the extent to which the Basel framework has been adopted across Africa. We then present the main characteristics of the South African and Kenyan banking systems, before conducting our analysis through the assessment of three hypotheses. In doing so, we seek to explore an appropriate approach to strengthening banking-system resilience in a context shared by many African economies, where banks face comparatively higher levels of risk, particularly credit risk.

Historical Background – The Subprime Crisis

In 2008, the collapse of Lehman Brothers constituted a major shock to the global financial industry. This event marked one of the culminating points of the subprime crisis, which notably originated from the large-scale granting of mortgage loans to households with weak creditworthiness. The deterioration of the U.S. housing market and the proliferation of payment defaults subsequently generated considerable losses for institutions exposed to these claims.

However, the crisis was not confined to the U.S. mortgage market. Its global transmission was notably facilitated by securitisation. Mortgage claims were pooled, transformed into financial securities—notably Mortgage-Backed Securities (MBS)—and subsequently distributed to banks and investors through international financial markets. Institutions such as Fannie Mae, Freddie Mac and Ginnie Mae played an important role in the development of the U.S. mortgage securitisation market, while more complex financial structures, such as Collateralized Debt Obligations (CDOs), contributed to the further dissemination of credit risk throughout the financial system.

The scale of the losses, combined with uncertainty surrounding financial institutions' actual exposure to these assets, progressively triggered a crisis of confidence and a drying-up of liquidity in the interbank market. These tensions reached a critical point with the bankruptcy of Lehman Brothers in September 2008, transforming an already severe financial crisis into a global systemic crisis.

Financial Crisis and Africa

Almost all economies worldwide were affected by the 2008 crisis, irrespective of their exposure to subprime assets. Africa was no exception. African banks were, overall, relatively little exposed to subprime loans and complex securitised financial products, notably because their financial markets were less deep and less integrated into international markets. This situation helped to limit the effects of direct financial contagion.

The impact of the crisis on the continent was therefore transmitted primarily through the real economy, notably via the slowdown in global trade, the contraction in exports, the decline in foreign direct investment and the reduction in certain capital flows. Economies more closely integrated into international financial markets, such as South Africa, were nevertheless more exposed to global financial turmoil.

In the aftermath of the crisis, international authorities undertook an overhaul of the prudential banking framework in order to strengthen the resilience of the financial system. This development notably resulted in the introduction of the Basel III framework, based on strengthened requirements relating to capital, liquidity, leverage and, more broadly, banking risk management.

Basel III and African Banking Systems

The 2008 crisis revealed weaknesses in banking systems worldwide. Banks were insufficiently capitalised and did not always hold sufficient liquid assets to cover their short-term liquidity needs. The crisis also highlighted shortcomings in banking supervision, including macroprudential supervision that remained insufficiently developed.

Against this backdrop, banking regulators decided to rethink the global banking regulatory framework and adapt the Basel framework to the challenges revealed by the crisis. This notably involved strengthening capital requirements and introducing capital buffers, limiting excessive leverage through a leverage ratio, requiring a sufficient level of liquid assets to cover liquidity needs, limiting the impact of internal models on RWA calculations through the output floor, and limiting the concentration of exposures to a single counterparty.

The table below summarises the main weaknesses revealed by the crisis and the measures taken by regulators in response.

Weakness revealed by the crisis	Basel III response	Practical impact
Insufficient / poor-quality capital	Stronger CET1 requirements	More high-quality capital available to absorb losses
Excessive leverage	Leverage Ratio	Constrains excessive leverage independently of risk-weighted assets
Insufficient short-term liquidity	Liquidity Coverage Ratio (LCR)	Requires sufficient high-quality liquid assets to withstand a 30-day stress scenario
Excessive reliance on unstable short-term funding	Net Stable Funding Ratio (NSFR)	Requires a more stable funding structure over a one-year horizon
Procyclicality	Capital Conservation Buffer (CCoB) + Countercyclical Capital Buffer (CCyB)	Builds capital buffers that can absorb losses and, particularly for the CCyB, be released during periods of stress
Inadequate risk capture in RWA	Revised risk-weighted capital frameworks	Improves the capture of credit, market, counterparty credit and securitisation risks
Excessive variability in internal models	Output Floor	Limits the extent to which internal models can reduce RWA relative to the standardised approaches
Systemic banks / contagion risk	G-SIB additional loss-absorbency requirements	Requires additional capital for global systemically important banks
Excessive concentration risk	Large Exposures Framework	Limits exposures to a single counterparty or group of connected counterparties

Table 1: Weaknesses Revealed by the Financial Crisis and the Basel III Response

However, the regulation issued by the Basel Committee is not applied uniformly across jurisdictions worldwide. While European Union countries are at the forefront of Basel III implementation, the framework has not yet been fully implemented in certain jurisdictions such as the United Kingdom, where the FRTB is not scheduled to enter into force until 2027 (FRTB-SA)¹, or the United States, where certain components of the Basel III framework have not yet been fully implemented².

Nor is there uniform adoption of the Basel framework across the African continent. While South Africa has applied Basel III since 2013³ and its framework has been assessed as compliant by the Basel Committee, other countries, such as Kenya, Nigeria and Morocco, have incorporated various principles or requirements inspired by the Basel framework without necessarily reproducing it in full⁴. These countries favour local adaptation that takes into account the specific characteristics of their economies, as well as the size and degree of sophistication of their banks. South Africa is also the only African country that is a member of the Basel Committee, which may partly explain its more direct integration into the international regulatory process.

South African Banking Landscape

South Africa has a developed, sophisticated banking system that is highly integrated into financial markets. It is regarded as one of the most developed in Africa and exhibits a high degree of sophistication by international standards. Its size, measured by total assets, amounts to USD 506 billion. South African banks have a significant regional presence across sub-Saharan Africa and conduct diversified activities ranging from retail banking and market activities to asset management and complex financial services. They are adequately capitalised, with a total capital ratio of 17.54% and a CET1 ratio of 13.33% in September 2025, and display strong liquidity levels, with an LCR of 156.31% and an NSFR of 115.96% as at 31 July 2026.

The sector nevertheless remains highly concentrated, with six banks holding 92% of banking assets in 2025. It also remains exposed to structural challenges in the South African economy, including high unemployment, weak growth, substantial public debt, high funding costs and infrastructure constraints. Credit risk associated with households, SMEs and the sovereign nevertheless remains relatively contained, with an NPL-to-gross-loans ratio of 4.67%⁵.

As mentioned earlier, South Africa is also the only African country that is a member of the Basel Committee, which may partly explain the high degree of adoption and transposition of Basel standards into its national regulatory framework.

Kenyan Banking Landscape

Kenya has one of the most developed and diversified banking systems in East Africa, with more than 200 financial institutions, including 38 commercial banks. The Kenyan banking system is characterised by a high degree of digitalisation, notably through mobile money and digital financial services, which play a major role in the financial ecosystem. Its size is more modest than that of South Africa, with total assets of USD 62 billion. The sector also records strong profitability, with an ROE of 22.7%.

Kenyan banks are well capitalised, with a capital ratio representing 20% of risk-weighted assets. The core capital ratio, which stood at 14.5% in September 2025, reached 18.2% in December 2025. Banks also play a central role in financing the economy, notably through loans granted to households and businesses, particularly in the trade and real estate sectors.

The main vulnerability of the Kenyan banking system nevertheless remains particularly high credit risk, with the NPL-to-gross-loans ratio standing at 15.4% at end-2025⁶. The prudential framework, supervised

¹ PS1/26 – Implementation of Basel 3.1: Final rules, PRA, 2026

² Agencies request comment on proposals to modernize the regulatory capital framework and maintain the strength of the banking system, FED, 2026

³ South Africa's implementation of Basel II and Basel III, South African Reserve Bank, 2026

⁴ Pan-African Banks, Opportunities and Challenges for Cross-Border Oversight, International Monetary Fund, 2015

⁵ Selected South African banking sector trends, South African Reserve Bank, Prudential Authority, 2026

⁶ Quarterly Economic Review, Central Bank of Kenya, 2025

by the Central Bank of Kenya, differs substantially from the Basel framework. Kenya is not a member of the Basel Committee, and its prudential framework and supervisory approach are more closely calibrated to its structural and economic realities.

Study Objective

The primary objective of this study is to analyse, through the cases of South Africa and Kenya, how prudential authorities can adapt capital requirements to the characteristics and risk profile of each banking system in order to reconcile financial resilience with the management of the economic cost associated with capital allocation. The central research question is therefore as follows: *how should prudential capital requirements be calibrated in order to strike a balance between banking-sector resilience and the economic cost of capital, given different risk profiles?*

Study methodology

To conduct this study, we seek to test the following three hypotheses:

Hypothesis 1: The level of banking risk observed at the macroeconomic level in a country (or economic area) may justify higher capital requirements imposed by regulators. Regulatory calibration may therefore be more conservative where domestic risk is high. To test this hypothesis, we analyse data from the South African and Kenyan banking sectors. We compare, on the one hand, asset quality in order to infer the level of risk in each sector and, on the other hand, the prudential treatment of these assets and the resulting capital requirements.

Hypothesis 2: Optimal prudential calibration depends on the level of local risk rather than strictly on the degree of adoption of the Basel framework or on a simple increase in capital requirements. In practice, the central issue for banks does not lie in the strict application of standards issued by the Basel Committee, but in the alignment between regulation and actual risk. To test this hypothesis, we examine the Harambee Bank, a hypothetical commercial bank established for the purposes of this study. After subjecting Harambee Bank to a stress test based on a sudden increase in the cost of risk resulting from an energy shock, we place it, under two distinct scenarios, in two environments: Environment A, in which the minimum capital requirement corresponds to Basel requirements and credit risk is moderate, and Environment B, characterised by higher capital requirements and greater credit risk. We then vary the capital requirement and assess Harambee Bank's capacity to absorb shocks.

Hypothesis 3 : Higher prudential capital requirements strengthen the resilience of the banking sector but generate an additional economic cost that varies depending on the characteristics and risk profile of each banking system. To test this hypothesis, we place Harambee Bank in the South African and Kenyan banking environments. We then define two scenarios based on the current capital requirements and calculate, for each scenario, the cost of capital tied up and the resilience capacity. We subsequently analyse the trajectory of the additional allocated-capital-cost – resilience-capacity curve in the South African and Kenyan contexts and explain any differences observed.

Keys findings

Hypothesis 1 — Banking Risk and the Calibration of Prudential Requirements

As at end-September 2025, the NPL-to-gross-loans ratio stood at 4.67% in South Africa, reflecting a relatively contained level of credit risk. The overall implicit average risk weight applied to assets to derive RWA amounted to 45%, while the total capital requirement, aligned with the Basel framework, reached 10.5%, including buffers, of which 7% consisted of core capital.

In Kenya, the NPL-to-gross-loans ratio reached 13.96% over the same period, almost three times the level observed in South Africa. In response to this significantly higher risk profile, the prudential framework appears more conservative: the overall implicit average risk weight reaches 74%, while the total capital requirement stands at 14.5%, four percentage points above the South African requirement, including 10.5% of core capital (8% + a 2.5% buffer).

These results support our first hypothesis: a higher level of banking risk at the level of a country or economic area may lead regulators to impose higher capital requirements.

Hypothesis 2 — Capital Calibration Based on Local Risk

To test our second hypothesis, we placed a fictitious bank, Harambee Bank, in two distinct environments: Environment A, comparable to the South African banking system (10.5% capital requirement), and Environment B, comparable to the Kenyan banking system, characterised by a capital requirement of 14.5% and credit risk approximately three times higher.

In the first scenario, Harambee Bank is capitalised, in each environment, one percentage point above the minimum requirement. Despite the higher regulatory requirement in Environment B, its loss-absorption capacity remains lower: the coverage ratio calculated as the ratio of the initial capital buffer to the loss generated by the stress scenario stands at 0.33 in Kenya, compared with 1 in South Africa.

In the second scenario, Harambee Bank's capitalisation is calibrated according to the risk actually incurred, namely two percentage points above the minimum requirement in Environment A and six percentage points above it in Environment B. The bank then achieves the same shock-absorption capacity in both environments.

These results support our second hypothesis: optimal prudential calibration does not depend solely on the application of the Basel framework or on a simple increase in capital requirements, but on adapting the level of capital to the risk actually incurred in each environment.

Hypothesis 3 — Economic Cost of Resilience

Our analysis of the third hypothesis shows that, as its capitalisation increases, Harambee Bank incurs a higher cost of capital per unit of resilience achieved in Kenya than in South Africa.

The dynamics of this relationship also differ between the two environments: the average slope of the curve linking the cost of additional capital to residual shock-absorption capacity is 2.4 times higher in Kenya than in South Africa. In other words, the cost associated with obtaining additional resilience increases more rapidly in the Kenyan environment.

These results support our third hypothesis: higher prudential capital requirements strengthen banking-sector resilience but generate an additional economic cost whose magnitude varies according to the characteristics and risk profile of each banking system.

Core analysis

Throughout this section, we analyse data for the South African and Kenyan banking sectors as at end-September 2025.

Hypothesis 1

Analysis of South African Banking Sector

Overview

According to information collected from the South African central bank, South African banking sector records a total assets of USD 506 bn as at end-September 2025. Assets consist primarily of gross loans, investment and trading positions, short-term and negotiable securities, and derivative financial instruments, highlighting the diversity of South African banks' activities. The sector also records strong profitability, with an ROE of 16.10% as at end-September 2025⁷.

Asset Quality

South African banks' assets include USD 379 bn of gross loans, representing 75% of total assets. Loans consist primarily of home loans, term loans, commercial mortgages, lease and credit cards. The NPL-to-gross-loans ratio, which relates non-performing loans to gross loan exposures, stood at 4.67% as at end-September 2025, already corresponding to a relatively high level of risk compared with the levels generally observed in OECD countries (1–2%)⁸. The provisioning rate for non-performing loans is approximately 47%, while provisions as a proportion of gross loan exposures amount to 2.18%. This analysis indicates that South African loan exposures present a relatively high level of risk, although the NPL ratio remains close to generally observed levels.

Prudential Banking Regulation in South Africa

South Africa is the only African country that is a member of the BCBS, implying an explicit commitment to implement the Basel framework. To analyse assets subject to credit risk, we divided them into four main categories: Residential Mortgage, Retail, Corporate and Financial Services. Total RWA in South Africa amount to USD 230 bn, representing approximately 45% of total exposures, while RWA attributable to credit risk amount to approximately USD 142 bn.

Based on the information available, we then calculated the implicit average risk weights for each exposure category. We obtain the following ratios: Residential Mortgage – 21%; Retail – 49%; Corporate – 37%; and Financial Services – 10%.

Minimum capital requirements in South Africa are aligned with Basel requirements, namely 4.5% CET1 plus a 2.5% conservation buffer, bringing the core capital requirement to 7%, and 8% plus the 2.5% conservation buffer, resulting in a 10.5% total capital requirement. To simplify our analysis, we exclude the other capital buffers and retain only the 2.5% countercyclical conservation buffer. Nevertheless, the CET1 ratio stood at 13.5% and the total capital ratio at 17.41% as at end-September 2025, therefore significantly exceeding the aforementioned requirements.

Liquidity levels also remain well above Basel requirements, with an LCR of 156.31% and an NSFR of 115.96% as at end-July 2026 for the banking sector as a whole.

⁷ Selected South African banking sector trends, South African Reserve Bank, Prudential Authority, 2026

⁸ OECD Economic Surveys: France 2026

Finally, regulatory capital as a proportion of total assets (unweighted) stands at approximately 8%.

Analysis of Kenyan Banking Sector

Overview

As at end-September 2025, the Kenyan banking sector reported total assets of USD 62 billion, significantly below the level observed in South Africa. The sector records strong performance, including an ROE of 22.7% as at end-September 2025.

Asset Quality

Gross loans represent approximately 53% of Kenyan banks' assets. Compared with South Africa, lending activities therefore account for a smaller part of banks' balance sheets. Exposures primarily finance households and the trade, industry, real estate, transport and telecommunications, and financial services sectors.

The quality of these assets nevertheless reveals a particularly high level of credit risk. As at end-September 2025, Kenyan banks reported an NPL ratio (non-performing loans to gross loans) of 13.96%, a level substantially above those generally observed in OECD countries and significantly higher than that recorded in South Africa.

The provisioning rate stands at 42%, compared with 47% in South Africa, reflecting a slightly lower level of coverage of non-performing loans than in South Africa. The ratio of provisions for effectively impaired claims to gross loan exposures represents approximately 6%, nearly three times the level observed in South Africa.

This analysis therefore highlights a significantly higher exposure to credit risk within the Kenyan banking sector. This raises the following question: how do Kenyan prudential authorities adapt their regulatory framework to this level of risk, given the cyclical and structural characteristics of the economy, and what are the implications for capital requirements intended to ensure banking-sector resilience?

Prudential Banking Regulation in Kenya

While South Africa applies the Basel III framework to its banking system, Kenya, which is not a member of the BCBS, has opted to apply its own regulatory framework.

Assets subject to credit risk are likewise divided into four main categories: Residential Mortgage, Retail, Corporate and Financial Services, corresponding respectively to mortgage loans, household loans, corporate loans and exposures to financial institutions.

In Kenya, total RWA amount to USD 46 bn, representing 74% of total assets. The implicit average risk weight of assets is therefore significantly higher than that observed in South Africa. RWA attributable to credit risk amount to approximately USD 33 bn. As for South Africa, we identified the risk weights applied to the various exposure categories mentioned above using a guide published by the Central Bank of Kenya, in January 2013⁹. The applicable risk weights are as follows: Residential Mortgage: 50%; Retail: 100%; Corporate: 100%; and Financial Services: 20%. We therefore observe that the risk weights applied by the Central Bank of Kenya are significantly higher than those observed in South Africa.

⁹ Prudential Guidelines for Institutions Licensed Under the Banking Act, Central Bank of Kenya, 2013

Against these RWA, a minimum level of capital is required to enable banks to absorb potential shocks. The guide published by the Central Bank of Kenya mentions that the minimum total capital requirement in Kenya is 14.5% (12% + a 2.5% countercyclical buffer), including 10.5% (8% + a 2.5% countercyclical buffer) of core capital (CET1 equivalent). The capital requirement in Kenya is therefore significantly higher than the minimum requirements observed in South Africa, which are based on the Basel framework. September 2025 data show a total capital ratio of 20% of RWA for Kenyan banks, including 17.60% of core capital, likewise significantly exceeding the minimum requirements set by the regulator.

Unlike South Africa, Kenya applies neither the LCR nor the NSFR. The liquidity ratio, calculated as the ratio of high-quality liquid assets to short-term deposits, stands at 59.30%, nearly three times the minimum required level of 20%¹⁰.

Finally, regulatory capital allocated as a proportion of total assets represents approximately 15%, nearly twice the level observed in South Africa. Relative to its assets, the Kenyan banking system therefore immobilises nearly twice as much capital as the South African banking system.

Inferences – Hypothesis 1

Our analysis yields the following observations. A comparison of the NPL ratios in the two countries allows us to infer that Kenyan banks (roughly 14%) are more exposed to credit risk than their South African counterparts (4.67%). The particularly high level of credit risk in Kenya, approximately seven times the level generally observed in OECD countries, may notably explain the lower proportion of loans in Kenyan banks' assets compared with South African banks (53% versus 75%). Furthermore, this higher level of risk may also contribute to explaining the higher profitability of Kenyan banks, whose ROE stands at 22.7%, compared with 16.10% in South Africa, representing a difference of approximately six percentage points.

Our study also shows that the regulatory response differs between the two countries according to the level of risk observed. In South Africa, the ratio of RWA to assets averages 45%, compared with 74% in Kenya. The assets of Kenyan banks, previously identified as presenting higher credit risk, therefore translate into a proportionally higher level of RWA.

Capital requirements applied to RWA in South Africa are aligned with the Basel framework. In Kenya, the total capital requirement stands at 14.5%, including 10.5% of core capital (CET1 equivalent), four percentage points above South Africa (14.5% versus 10.5% for total capital, including the buffer).

Our study therefore highlights that in Kenya, where banks' credit risk is significantly higher than in South Africa, the prudential framework is more conservative: assets translate into proportionally higher RWA and capital requirements are also higher. These observations support Hypothesis 1, according to which the level of banking risk in a country may lead regulators to impose higher capital requirements.

The table below summarises the main observations and conclusions of this analysis^{11,12}.

Note : Conversions rate (as per september 2025)

1 USD = 17.26 South African Rand

1 USD = 129.28 Kenyan Shillings

¹⁰ Prudential Guidelines for Institutions Licensed Under the Banking Act, Central Bank of Kenya, 2013

¹¹ Selected South African banking sector trends, South African Reserve Bank, Prudential Authority, 2026

¹² Quarterly Economic Review, Central Bank of Kenya, 2025

Banking data (September 2025)	South Africa		Kenya	
	Rand (ZAR)	Dollar (USD)	Shilling (KES)	Dollar (USD)
Total assets (USD bn)	8 728	506	8 060	62
Risk-weighted asstes (USD bn)	3 968	230	5 989	46
Minimum requirement	10,5%	10,5%	14,50%	14,50%
Total capital ratio	17,41%	17,41%	20%	20%
CET1 ratio	13,5%	13,5%	17,60%	17,60%
Leverage ratio	6,39%	6,39%	n/a	n/a
Core capital (USD bn)	535,70	31	1 059	8
Total regulatory capital (USD bn)	690,85	40	1 198	9
Liquidity (Overall liquidity ratio)	n/a	n/a	59,3%	59,3%
Liquidity Coverage Ratio (LCR)	156,31%	156,31%	n/a	n/a
Net Stable Funding Ratio (NSFR)	115,96%	115,96%	n/a	n/a
Total regulatory capital to total assets	7,92%	7,92%	14,86%	14,86%
Return on Equity ratio (ROE)	16,1%	16,1%	22,7%	22,7%

Table 2: South African and Kenyan Banking Sector Indicators

Asset quality data (September 2025)	South Africa		Kenya	
	Rand (ZAR)	Dollar (USD)	Shilling (KES)	Dollar (USD)
Gross loans (USD bn)	6 550	379	4 258	33
Gross loans to Total assets (USD bn)	75%	75%	53%	53%
Net non-performing loans (NPL)	306	18	594	4,6
Net NPL to gross loans	4,67%	4,67%	13,96%	13,96%
Credit impairments (USD bn)	143	8	250	2
Credit impairments to gross loans	2,18%	2,18%	5,86%	5,86%
NPL provisioning rate	46,67%	46,67%	42,02%	42,02%

Table 3: Asset Quality Indicators in South Africa and Kenya

Indicators	South Africa			
Main exposures	Residential mortgage (retail)	Retail (other)	Corporate	Financial services
Assets amounts (USD bn)	91	55	237	82
Risk weight	21%	49%	37%	10%
Risk weight amounts (USD bn)	19	27	88	8
Regulatory capital allocated (USD bn)	3	5	15	1
Cost of capital (USD bn)	0,33	0,47	1,53	0,14

Table 4: Detailed Breakdown of Exposures and Risk Weights – South Africa

Indicators	Kenya			
Main exposures	Residential mortgage (retail)	Retail (other)	Corporate	Financial services
Assets amounts (USD bn)	4	9	18	2
Risk weight	50%	100%	100%	20%
Risk weight amounts (USD bn)	2	9	18	0
Regulatory capital allocated (USD bn)	0,40	2	4	0,07
Cost of capital (USD bn)	0,04	0,18	0,37	0,01

Table 5: Detailed Breakdown of Exposures and Risk Weights – Kenya

Hypothesis 2

Having validated the first hypothesis of our study, we now examine the second, according to which optimal prudential calibration depends on the level of local risk and not exclusively on the degree of implementation of the Basel framework or on a simple increase in capital requirements.

For this purpose, we examine Harambee Bank, a hypothetical commercial bank established in Mombasa, Kenya. The bank has RWA of USD 10,000k and an initial cost of risk of USD 300k. We subject Harambee Bank to two scenarios in order to assess its capacity to absorb shocks.

In each scenario, Harambee Bank is placed in two distinct environments. Environment A, comparable to the South African banking context, imposes a minimum capital requirement of 10.5%. Environment B, comparable to the Kenyan context, imposes a minimum requirement of 14.5%, a significantly higher level than in Environment A.

In each environment, Harambee Bank experiences an increase in its cost of risk following an energy shock. In Environment A, the cost of risk increases by USD 100k, equivalent to 33% of its initial level. Environment B, characterised by higher credit risk—the NPL ratio in Kenya being approximately three times that observed in South Africa—experiences a 100% increase in the cost of risk, equivalent to USD 300k. This deterioration generates a loss and, consequently, capital consumption of USD 300k over the financial year.

Absorption capacity is measured using the following coverage ratio:

$$[(Capital\ held - Minimum\ capital\ required) / Loss\ resulting\ from\ the\ stress\ scenario]$$

In Scenario 1, Harambee Bank is capitalised, in each of the two environments, one percentage point above the required regulatory minimum, without therefore adapting capitalisation to each local risk profile. We observe that, despite a significantly higher minimum capital requirement in Environment B (14.5%) than in Environment A (10.5%), the coverage ratio for losses generated by the energy shock remains lower in Environment B (0.33 versus 1). In other words, Harambee Bank can absorb the shock once in Environment A, characterised by a more moderate level of risk, compared with only 0.33 times in Environment B, indicating insufficient coverage.

In Scenario 2, the capital requirements and risk levels remain identical to those previously considered in Environments A and B. However, Harambee Bank is capitalised 2 and 6 percentage points above the minimum regulatory requirement in Environments A and B, respectively. Harambee Bank therefore holds a larger capital buffer in Environment B, reflecting its awareness of the locally higher and persistent credit risk. We then observe an identical coverage ratio of 2 in both environments. Harambee Bank calibrates its capital differently according to the local risk profile, which differs between Environments A and B, ultimately achieving the same level of resilience. *The two scenarios are presented in the table below:*

Scenario 1	Risk environment	
	A	B
Capital held	1 150	1 550
Capital held (%)	11,5%	15,5%
Regulatory minimum	10,5%	14,5%
Buffer maintained by banks	1%	1%
Stressed loss	100	300
Coverage ratio	1	0,33

Table 6 : Detailed Stress-Loss Coverage Ratio – Scenario 1

Scenario 2	Risk environment	
	A	B
Capital held	1 250	2 050
Capital held (%)	12,5%	20,5%
Regulatory minimum	10,5%	14,5%
Buffer maintained by banks	2%	6%
Stressed loss	100	300
Coverage ratio	2	2

Table 7 : Detailed Stress-Loss Coverage Ratio – Scenario 2

Inferences – Hypothesis 2

Scenario 1 therefore shows that, despite a higher capital requirement (14.5%), the environment characterised by the highest risk remains less covered relative to its local risk. In Scenario 2, Harambee Bank succeeds in covering this risk in Environment B not through a mechanical increase in the minimum capital

requirement, but through a level of capital held that is calibrated to a significantly higher local risk, namely capitalisation six percentage points above the regulatory requirement. To achieve an equivalent resilience capacity in both environments, the capital response must therefore be proportionate to the intensity of the risk to which the bank is exposed.

Our analysis therefore shows that a higher capital ratio or the simple application of the Basel framework does not necessarily, in itself, constitute adequate calibration. The appropriate level of capital must be assessed in relation to the local risk to be absorbed. To obtain comparable shock-coverage capacity in environments presenting different levels of risk, it is therefore insufficient either to transpose a regulatory framework mechanically or to increase required capital uniformly: the level of capital and the associated buffers must be calibrated according to the risk actually observed.

Accordingly, our study supports Hypothesis 2, according to which optimal prudential calibration does not depend exclusively on the application of Basel III or on a simple increase in capital requirements, but also on the level of local risk. The key issue is therefore to determine a capital intensity proportionate to the risk actually borne by the banking system and, where appropriate, to adapt capital buffers to that level of risk.

Hypothesis 3

Having validated the second hypothesis, we examined the third hypothesis, according to which higher prudential requirements strengthen banking-sector resilience but generate an economic cost per level of resilience whose magnitude varies according to the characteristics and risk profiles specific to each banking system.

To test this hypothesis, we examined the evolution of the cost of capital per level of resilience for a bank placed in two different environments. The “cost of resilience” indicator corresponds to the ratio between the cost of tied-up capital and the bank’s residual capacity to absorb shocks following a stress test. It is calculated as follows:

$$[Cost\ of\ resilience = (Tied-up\ capital \times Cost\ of\ capital\ in\ the\ environment) / Residual\ absorption\ capacity]$$

Residual absorption capacity is calculated as per:

$$[Residual\ absorption\ capacity = Capital\ actually\ held - Minimum\ capital\ required - Loss\ resulting\ from\ the\ stress\ test]$$

The objective is therefore to determine the cost of capital borne by the bank for each unit of resilience achieved, in other words, the amount spent by the bank per unit of resilience. We represented this indicator graphically in order to observe its evolution in the two environments.

For this purpose, we subjected Harambee Bank to two scenarios. In each scenario, Harambee Bank is placed in two distinct environments: the South African banking environment, characterised by a total capital requirement of 10.5%, corresponding to Basel standards, and the Kenyan banking environment, characterised by a minimum total capital requirement of 14.5%. Harambee Bank is at the centre of both scenarios and is capitalised 20% above the minimum capital requirement applicable in each environment.

Risk-weighted assets amount to USD 10,000k. In each scenario, we applied a stress test represented by a 30% increase in the cost of risk in South Africa and a 90% increase in Kenya, taking into account our previous observation that credit risk in Kenya is approximately three times higher than that observed in South Africa, with an NPL ratio of 14% in Kenya compared with 4.67% in South Africa.

For each environment, we then increased the capital requirement in one-percentage-point increments. The core of our analysis therefore consists in examining the curve representing the relationship between, on the one hand, the evolution of the additional cost of capital resulting from increased capitalisation and, on the other hand, the evolution of the bank’s capacity to cover losses, referred to here as “resilience”, as the level of capitalisation increases.

Based on the information collected, the cost of capital is estimated at 15% in South Africa¹³. In Kenya, a country structurally more exposed to financial risks, it stands at 18%¹⁴.

The results of our analysis are presented in the tables below:

Scenario 1	South Africa				
Capital requirement (%)	10,5%	11,5%	12,5%	13,5%	14,5%
Capital requirement (\$k)	1 050	1 150	1 250	1 350	1 450
Buffer (%)	20%	20%	20%	20%	20%
Capital held	1 260	1 380	1 500	1 620	1 740
Initial loss-absorption capacity	210	230	250	270	290
Stressed loss (%) (cost of risk shock)	30%	30%	30%	30%	30%
Stressed loss (amount)	90	90	90	90	90
Remaining capital (additional loss-absorption capacity)	120	140	160	180	200
Additional capital	0	120	240	360	480
Cost of additional capital (CoE = 14%)	0,0	18,0	36,0	54,0	72,0

Table 8 : Harambee Bank stress test – Scenario 1 (South Africa)

Scenario 2	Kenya				
Capital requirement (+4 percentage points)	14,5%	15,5%	16,5%	17,5%	18,5%
Capital requirement	1 450	1 550	1 650	1 750	1 850
Buffer	20%	20%	20%	20%	20%
Capital held	1 740	1 860	1 980	2 100	2 220
Initial loss-absorption capacity	290	310	330	350	370
Stressed loss (%) (3× higher credit risk in Kenya)	90%	90%	90%	90%	90%
Stressed loss (amount)	270	270	270	270	270
Remaining capital (additional loss-absorption capacity)	20	40	60	80	100
Additional capital required	0	120	240	360	480
Cost of additional capital (CoE = 17%)	0,0	21,6	43,2	64,8	86,4

Table 9 : Harambee Bank stress test – Scenario 2 (Kenya)

Indicators	South Africa				
Cost of additional capital (CoE = 15%)	0	18	36	54	72
Remaining capital (additional loss-absorption capacity)	120	140	160	180	200
Cost of additional capital to additional loss-absorption capacity ratio	0,00	0,13	0,23	0,30	0,36

Table 10 : Harambee Bank cost to additional capital to loss absorption capacity ratio calculation (South Africa)

Indicators	Kenya				
Cost of additional capital (CoE = 18%)	0,0	21,6	43,2	64,8	86,4
Remaining capital (additional loss-absorption capacity)	20	40	60	80	100
Cost of additional capital to additional loss-absorption capacity ratio	0,00	0,54	0,72	0,81	0,86

Table 11 : Harambee Bank cost to additional capital to loss absorption capacity ratio calculation (South Africa)

The curve below therefore represents the cost of immobilised capital borne by Harambee Bank to obtain an additional level of resilience, in South Africa on the one hand and in Kenya on the other.

¹³ Major banks analysis, PriceWaterhouseCoopers (PWC), 2025

¹⁴ Equity Group Holdings Proposes a Record Dividend Payout of Kshs 15.1 Billion after Kshs 43.7 Billion Profit after Tax, Equity Group, 2024

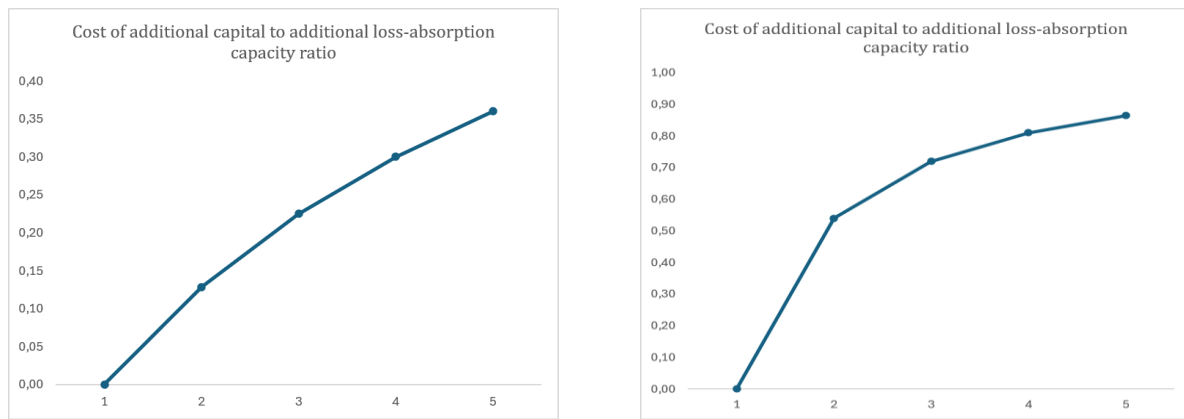


Figure : Cost of additional capital to loss absorption capacity ratio chart evolution (South africa and Kenya)

Inferences – Hypothesis 3

The following observations emerge from our study:

The amount borne in terms of the cost of capital to obtain an additional level of resilience (100 on a base-100 basis) differs according to the environment considered. In Kenya, Harambee Bank bears a cost of capital 2.5 to 4 times higher than that observed in South Africa to obtain an equivalent level of resilience as its capitalisation varies.

The trajectory of the curve, reflecting the rate of change in the cost of resilience, differs depending on whether Harambee Bank is placed in the South African or Kenyan environment. We measured this rate using an *average slope indicator*, calculated as follows for each curve: $(Y_{final} - Y_{initial}) / (X_{final} - X_{initial})$

This average slope stands at 0.09 in South Africa, compared with 0.22 in Kenya. In other words, Harambee Bank must mobilise additional resources at a rate 2.4 times higher in Kenya than in South Africa in order to obtain the same additional level of resilience.

Accordingly, our analysis supports Hypothesis 3, according to which higher prudential requirements generate an economic cost per level of resilience whose magnitude varies according to the characteristics and risk profile specific to each banking system. The same level of prudential requirement does not necessarily have the same economic value in two systems with different risk profiles.

Conclusion

It follows from our foregoing analysis that, economic, financial, and institutional characteristics vary significantly across regions of the world. In some emerging economies, where informal activities account for a substantial share of economic activity, financial markets may notably be less developed and less integrated into global financial markets. These characteristics, together with other structural vulnerabilities specific to each economy, may expose banks to higher levels of risk, particularly credit risk.

Against this heterogeneous backdrop, preserving the resilience of the banking sector without overlooking its competitiveness requires regulators to go beyond the uniform application of international prudential standards. Regulatory requirements should also be calibrated according to the nature and intensity of the risks actually faced by banks within their respective economic environments.

This is precisely what we have sought to demonstrate through the comparative analysis of the South African and Kenyan banking systems. Our findings first show that an environment characterised by higher credit risk, assessed notably through the non-performing loan (NPL) ratio, may justify the adoption of a more conservative prudential approach, including higher capital requirements. The comparison between the two

banking systems therefore highlights the importance of taking local risk profiles into account when determining prudential requirements.

Our analysis also shows that the key challenge in achieving optimal prudential calibration lies neither in the mere adoption of Basel III nor in simply increasing capital requirements. A higher level of capital does not necessarily provide the same degree of resilience when the intensity of the underlying risk differs. The challenge therefore lies in determining a level of requirements that is consistent with the risks actually borne by each banking system. From this perspective, Basel III provides a benchmark prudential framework, but its effectiveness also depends on how its principles are adapted to the specific characteristics of each banking environment.

Finally, such adaptation cannot be considered independently of its economic cost. Our findings show that the cost associated with increasing resilience may vary significantly across banking systems, notably depending on their risk profile and cost of capital. In our analysis, the cost of capital deployed to achieve an additional unit of resilience increases more rapidly in the Kenyan environment than in the South African environment. Prudential calibration should therefore seek to strike an appropriate balance between financial resilience and the economic cost of capital, ensuring that greater banking-sector soundness is not achieved through a disproportionate mobilisation of resources that could ultimately affect banks' financing capacity and competitiveness.

More broadly, this study suggests moving beyond the question of the mere adoption of international prudential standards towards a broader consideration of how such standards should be adapted to local economic realities. As banking risks continue to evolve and diversify, the challenge for regulators may therefore lie less in determining how far prudential requirements should be strengthened than in understanding how they can be continuously adjusted to the risks actually borne by each banking system.

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