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## **Beyond Linearity: Institutional Quality as a Moderator of the Relationship Between Bank Liquidity Creation and Financial Stability in African Economies**

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### **ABSTRACT**

**Bank liquidity creation is a fundamental function of financial intermediation, transforming illiquid assets into liquid liabilities to support economic activity. While essential for economic growth, an excessive or insufficient level of liquidity creation can pose significant risks to financial stability. This article investigates the potentially non-linear relationship between bank liquidity creation and financial stability, with a particular focus on the moderating role of institutional quality within African economies. Leveraging a comprehensive review of existing literature, this study conceptualizes how various dimensions of institutional quality—such as control of corruption, rule of law, government effectiveness, and regulatory quality—can influence the nature and strength of this relationship. We posit that a curvilinear association exists, where optimal liquidity creation fosters stability, but deviations (either too little or too much) can lead to fragility. Furthermore, we argue that robust institutional frameworks can mitigate the adverse effects of extreme liquidity creation, fostering a more resilient financial system. This analysis provides critical theoretical insights for policymakers and regulators in African contexts, emphasizing the need for prudential regulation tailored to specific institutional environments to promote sustainable financial development and stability.**

### **KEYWORDS**

**Bank liquidity creation, Financial stability, Institutional quality, Non-linear relationship, African economies, Moderating role, Financial intermediation, Prudential regulation.**

### **I**NTRODUCTION

The financial sector, particularly the banking system, plays a pivotal role in economic development by facilitating capital allocation, managing risks, and, crucially, creating liquidity [8, 20, 52]. Bank liquidity creation, defined as the transformation of illiquid assets (like loans) into liquid liabilities (like deposits), is a core function of financial intermediation that supports investment, consumption, and overall economic growth [20, 24]. Banks achieve this by accepting short-term, liquid deposits and issuing long-term, illiquid loans, thereby bridging the maturity gap between savers and borrowers [20, 45]. This process is fundamental to a well-functioning economy, enabling efficient resource allocation and fostering real economic output [24].

However, the very act of liquidity creation, while beneficial, inherently exposes banks to liquidity risk, which can, if mismanaged, threaten individual bank stability and even systemic financial stability [33, 41, 46]. The global financial crisis of 2008-2009 starkly highlighted the "dark side" of excessive liquidity creation, demonstrating how it can contribute to leverage and systemic risk within the banking sector [2, 3, 4]. Consequently, post-crisis regulatory reforms, such as Basel III, have placed a renewed emphasis on bank liquidity management and capital requirements to enhance financial system resilience [5, 37, 48]. The challenge for regulators lies in striking a delicate balance: promoting sufficient liquidity creation to support economic activity without simultaneously fostering excessive risk-taking that could lead to financial instability or crises [22, 25, 41].

The relationship between bank liquidity creation and financial stability is complex and not necessarily linear. Economic theory suggests a potential curvilinear (U-shaped or inverted U-shaped) relationship [47]. Initially, an increase in liquidity creation may enhance financial stability by facilitating efficient intermediation and reducing liquidity hoarding [58]. However, beyond an optimal point, excessive liquidity creation can lead to maturity mismatches, increased risk-taking, and a higher susceptibility to bank runs or systemic shocks, thereby undermining stability [33, 41, 46]. This non-linear dynamic implies that "more" liquidity creation is not always "better" for stability, and identifying the optimal level is crucial for effective policy.

African economies present a unique and compelling context for studying this relationship. Despite significant progress in financial sector development over the past decades, African banking systems often operate within environments characterized by varying levels of institutional quality, political uncertainty, and structural vulnerabilities [9, 15, 18, 19, 53]. These institutional factors—encompassing aspects such as the rule of law, control of corruption, government effectiveness, regulatory quality, and political stability—are critical determinants of financial sector performance and stability [11, 12, 29, 42, 54]. Weak institutional frameworks can exacerbate the risks associated with liquidity creation, for instance, by undermining contract enforcement [13, 50], increasing political risk [31], or fostering corruption in bank lending [1, 14, 35, 60]. Conversely, strong institutions can provide a more predictable and transparent operating environment, enabling banks to manage liquidity risks more effectively and contributing to overall financial resilience [12, 29].

While existing literature has explored the link between bank liquidity creation and various outcomes like profitability [39], systemic risk [41, 62], and real economic output [24], and separately examined the role of institutional quality in financial development and stability [11, 12, 29, 38, 42, 54], there remains a significant gap in understanding their intricate interplay. Specifically, the non-linear nature of the relationship between bank liquidity creation and financial stability, and how institutional quality moderates this non-linearity, has not been extensively investigated, particularly within the diverse and evolving landscape of African banking sectors. Studies on African financial systems often highlight unique challenges, such as the cyclicity of lending [40, 64], the hoarding of reserves [56, 59], and the implications of Basel III rules [5].

This article aims to fill this critical gap by theoretically exploring the non-linear relationship between bank liquidity creation and financial stability in African economies, with a particular emphasis on the moderating role of institutional quality. We hypothesize that while a moderate level of liquidity creation is beneficial for financial stability, both very low and very high levels can be detrimental, leading to a non-linear (e.g., U-shaped or inverted U-shaped) relationship. Furthermore, we propose that the quality of institutions significantly influences the shape and strength of this non-linear nexus, potentially mitigating the adverse effects of extreme liquidity creation. By providing a comprehensive conceptual framework, this study offers valuable insights for policymakers, regulators, and bank management in African countries, guiding them towards more effective prudential regulations and institutional reforms necessary to foster resilient and stable financial systems that

genuinely support sustainable economic growth.

## **M**ETHODS

This article employs a conceptual and theoretical methodology to investigate the non-linear relationship between bank liquidity creation and financial stability, and the moderating role of institutional quality in African economies. As a review and theoretical exposition, it does not involve primary data collection or empirical econometric analysis. Instead, it synthesizes insights from a comprehensive body of existing literature to construct a robust conceptual framework and propose testable hypotheses. The approach is inherently interdisciplinary, drawing from banking theory, financial economics, institutional economics, and development studies.

### 2.1. Conceptual Framework and Hypotheses Development

The core of this study is built upon a conceptual framework that posits a non-linear relationship between bank liquidity creation and financial stability, moderated by institutional quality.

#### 2.1.1. Bank Liquidity Creation (BLC):

BLC is defined as the transformation of illiquid assets into liquid liabilities [20, 21]. Banks perform this crucial function by funding illiquid assets (e.g., long-term loans) with liquid liabilities (e.g., demand deposits) [20, 45]. BLC can be measured using various approaches, such as the "cat-and-mouse" approach by Berger and Bouwman (2009, 2015) [20, 21], which classifies bank activities into liquid assets, illiquid assets, liquid liabilities, and illiquid liabilities. This measure captures the essence of banks' maturity transformation and risk management. BLC is essential for economic growth and investment [18, 24].

#### 2.1.2. Financial Stability (FS):

Financial stability is a state where the financial system is able to absorb shocks and smoothly facilitate economic functions [38, 57]. It is a multi-faceted concept that can be measured using various indicators at both micro (individual bank) and macro (systemic) levels.

**Micro-level stability:** Often proxied by Z-score, which measures the distance to insolvency, or non-performing loans (NPLs) [7].

**Macro-level (Systemic) stability:** Measured by indicators such as CoVaR [6], SRISK [32], or bank failure rates [44, 46]. Systemic risk refers to the risk of collapse of an entire financial system or market, as opposed to the collapse of a single entity [4].

For this conceptual framework, we consider both micro and macro aspects of financial stability.

#### 2.1.3. Institutional Quality (IQ):

Institutional quality refers to the effectiveness, predictability, and fairness of a country's formal and informal rules and enforcement mechanisms [49]. Key dimensions of institutional quality include:

**Control of Corruption:** The extent to which public power is exercised for private gain, including petty and grand forms of corruption, as well as "capture" of the state by elites and private interests [1, 14, 35, 60].

**Rule of Law:** The extent to which agents have confidence in and abide by the rules of society, including the quality of contract enforcement, property rights, the police, and the courts [13, 50, 51].

**Government Effectiveness:** The quality of public services, the quality of the bureaucracy, the competence

of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies.

**Regulatory Quality:** The ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development [29].

**Political Stability and Absence of Violence/Terrorism:** The likelihood of political instability and/or politically motivated violence.

These indicators, often sourced from the World Bank's Worldwide Governance Indicators (WGI) [49], provide a comprehensive measure of the institutional environment. Institutional quality is crucial for financial development and stability, especially in emerging economies [11, 12, 29, 38, 42, 54].

#### 2.1.4. Proposed Non-Linear Relationship:

We propose that the relationship between bank liquidity creation (BLC) and financial stability (FS) is non-linear, specifically exhibiting an inverted U-shape.

**Hypothesis 1 (H1):** There is an inverted U-shaped relationship between bank liquidity creation and financial stability in African economies.

**Rationale:** At low levels, increasing BLC enhances FS by facilitating intermediation, reducing liquidity hoarding [56, 59], and supporting real economic activity [24]. However, beyond an optimal point, further increases in BLC lead to excessive maturity transformation, increased exposure to liquidity risk, and potential for bank runs [33, 41, 46], thereby undermining FS. This aligns with the "dark side of liquidity creation" [2] and the trade-off between liquidity creation and systemic risk [41].

#### 2.1.5. Proposed Moderating Role of Institutional Quality:

We propose that institutional quality (IQ) moderates the non-linear relationship between BLC and FS.

**Hypothesis 2 (H2):** Institutional quality positively moderates the inverted U-shaped relationship between bank liquidity creation and financial stability in African economies.

**Rationale:** Strong institutional quality provides a more predictable and transparent operating environment for banks [11, 12].

**At low BLC levels:** In weak institutional environments, even low levels of BLC might not translate into significant stability gains due to high transaction costs, corruption [1, 14, 35, 60], and weak enforcement of contracts [13, 50]. Strong institutions can amplify the positive effects of initial BLC.

**At high BLC levels (beyond optimal):** In weak institutional environments, high BLC is more likely to lead to instability due to lax regulation, poor supervision [29, 54], and increased risk-taking [35, 36]. Strong institutions, characterized by sound regulatory quality and effective governance [11, 29, 54], can mitigate these risks by enforcing prudential regulations (e.g., Basel III liquidity rules [5]), promoting transparency, and curbing excessive risk-taking, thereby flattening the "downward" slope of the inverted U-shape and extending the optimal range of BLC. This aligns with findings that institutional quality conditions the effect of bank regulations on stability [29].

## 2.2. Data Sources and Measurement (Conceptual)

For an empirical investigation of these hypotheses, a panel dataset covering a significant number of African economies over a relevant time period (e.g., 2000-2020) would be required.

**Bank-Level Data:** Financial statements of commercial banks in African countries, typically sourced from databases like BankScope (now Orbis BankFocus) or national central banks. This data would allow for the calculation of bank-specific liquidity creation and stability measures.

**Country-Level Data:**

**Institutional Quality Indicators:** World Bank's Worldwide Governance Indicators (WGI) for Control of Corruption, Rule of Law, Government Effectiveness, Regulatory Quality, and Political Stability [49].

**Macroeconomic Control Variables:** GDP growth, inflation, interest rates, financial development indicators (e.g., private credit to GDP), and banking sector specific variables (e.g., bank size, capital adequacy, market concentration). These would be sourced from World Bank Development Indicators (WDI), IMF databases [43], and national statistical offices.

### 2.3. Econometric Model Specification (Conceptual)

To test the non-linear relationship and the moderating role, a dynamic panel data model would be appropriate, given the persistence of financial variables and the need to control for unobserved bank-specific effects [10, 55].

A general model structure would be:

$$FS_{\{i,t\}} = \alpha + \beta_1 BLC_{\{i,t\}} + \beta_2 BLC_{\{i,t\}}^2 + \beta_3 IQ_{\{c,t\}} + \beta_4 (BLC_{\{i,t\}} \times IQ_{\{c,t\}}) + \beta_5 (BLC_{\{i,t\}}^2 \times IQ_{\{c,t\}}) + \gamma X_{\{i,t\}} + \mu_i + \varepsilon_{\{i,t\}}$$

Where:

- $FS_{\{i,t\}}$ : Financial stability of bank  $i$  in country  $c$  at time  $t$  (e.g., Z-score, or systemic risk measures).
- $BLC_{\{i,t\}}$ : Bank liquidity creation of bank  $i$  at time  $t$ .
- $BLC_{\{i,t\}}^2$ : Quadratic term for BLC, to capture the non-linear relationship [47].
- $IQ_{\{c,t\}}$ : Institutional quality index for country  $c$  at time  $t$ .
- $(BLC_{\{i,t\}} \times IQ_{\{c,t\}})$  and  $(BLC_{\{i,t\}}^2 \times IQ_{\{c,t\}})$ : Interaction terms to capture the moderating role of institutional quality on the linear and non-linear components of BLC.
- $X_{\{i,t\}}$ : Vector of bank-specific and macroeconomic control variables [29, 30, 31, 34, 36, 37, 39, 40, 48, 56, 59, 61, 62, 63, 64].
- $\mu_i$ : Unobserved bank-specific fixed effects.
- $\varepsilon_{\{i,t\}}$ : Error term.

### 2.4. Estimation Strategy (Conceptual)

Given the dynamic nature of the model (lagged dependent variable as a potential regressor if a dynamic model is chosen, e.g.,  $FS_{i,t-1}$ ), and the presence of fixed effects, standard OLS estimators would be biased [55]. Appropriate estimation techniques would include:

**System Generalized Method of Moments (GMM):** This approach is well-suited for dynamic panel data models with fixed effects and potential endogeneity [10]. It addresses the Nickell bias [55] and allows for

instrumenting endogenous variables.

Quasi-Maximum Likelihood (QML) Estimation: For short T panels, QML estimation can provide consistent and efficient estimates [48, 55]. This approach is particularly useful when the number of time periods (T) is small relative to the number of cross-sectional units (N).

The choice of estimator would depend on the specific data characteristics and the econometric properties of the variables. Robust standard errors would be used to account for heteroskedasticity and autocorrelation. Threshold analysis could also be employed to identify the optimal level of liquidity creation at different levels of institutional quality.

This conceptual methodological framework provides a robust foundation for an empirical study to test the proposed hypotheses, contributing significantly to the understanding of banking and financial stability in African economies.

## **R**ESULTS (HYPOTHETICAL)

The hypothetical results, derived from the conceptual framework and informed by the provided literature, suggest a complex and nuanced relationship between bank liquidity creation (BLC) and financial stability (FS) in African economies, significantly moderated by the quality of institutions. These findings are presented as if they were outcomes of an empirical study, illustrating the expected patterns and their statistical significance.

### 3.1. Descriptive Statistics and Preliminary Observations

Across a hypothetical panel dataset of African banks, preliminary descriptive statistics would likely reveal significant heterogeneity in bank liquidity creation, financial stability indicators (e.g., Z-score, non-performing loans, systemic risk measures), and institutional quality metrics across countries and over time. African financial systems have experienced periods of rapid growth alongside episodes of instability [9, 19]. The average Z-score for banks might indicate a moderate level of stability, with a wide dispersion reflecting varying risk exposures and regulatory environments. Liquidity creation measures would also show considerable variation, from banks primarily focused on traditional deposit-taking and lending to those engaging in more complex maturity transformation activities. Institutional quality indicators, such as control of corruption and rule of law, would demonstrate the well-known disparities across the continent [49, 54]. These initial observations would underscore the importance of a detailed analysis that accounts for both bank-specific and country-level factors.

### 3.2. Non-Linear Relationship Between Bank Liquidity Creation and Financial Stability

The econometric analysis, incorporating a quadratic term for bank liquidity creation (BLC<sup>2</sup>), would likely reveal a statistically significant non-linear relationship between BLC and financial stability, specifically an inverted U-shape.

**Initial Positive Effect:** At lower levels of liquidity creation, an increase in BLC would be associated with an improvement in financial stability (e.g., higher Z-score, lower systemic risk contribution). This positive effect would be captured by a significant positive coefficient for the linear term of BLC ( $\beta_1 > 0$ ). This finding would support the notion that banks' core function of transforming illiquid assets into liquid liabilities is beneficial for the economy and, up to a point, for the stability of individual banks and the broader financial system [24]. It would suggest that enabling banks to efficiently intermediate funds and provide liquidity to the real economy fosters resilience by reducing liquidity hoarding and supporting productive investment [18, 24].

**Optimal Point:** The inverted U-shaped relationship would imply an optimal level of liquidity creation

beyond which further increases become detrimental to financial stability. This optimal point would be identifiable from the coefficients of the linear and quadratic terms.

**Negative Effect at High Levels:** Beyond this optimal threshold, further increases in BLC would lead to a decline in financial stability, indicated by a significant negative coefficient for the quadratic term of BLC ( $\beta_2 < 0$ ). This finding would align with the "dark side of liquidity creation" [2, 3], where excessive maturity transformation and increased exposure to liquidity risk (e.g., through reliance on volatile wholesale funding) can heighten vulnerability to bank runs [33, 46] and contribute to systemic fragility [41, 62]. Banks engaging in overly aggressive liquidity creation might accumulate more illiquid assets relative to their liquid liabilities, making them susceptible to sudden withdrawals or market freezes.

This inverted U-shaped relationship would be robust across various measures of financial stability (e.g., Z-score for individual bank stability, and systemic risk measures like CoVaR or SRISK for macro-stability), suggesting a consistent pattern across different dimensions of financial health.

### 3.3. Moderating Role of Institutional Quality

The analysis of interaction terms between bank liquidity creation (linear and quadratic) and institutional quality (IQ) would reveal a statistically significant moderating role of institutional quality on the non-linear relationship between BLC and FS.

**Shifting the Optimal Point:** Higher institutional quality would be found to shift the optimal level of liquidity creation to a higher point. This means that in countries with stronger institutions, banks can engage in a greater degree of liquidity creation before encountering diminishing returns or negative impacts on stability. This would be reflected in the combined effect of the linear and quadratic interaction terms ( $\beta_4$  and  $\beta_5$ ).

**Mitigating Downside Risks:** Crucially, institutional quality would be found to flatten the "downward slope" of the inverted U-shaped curve at high levels of liquidity creation. This implies that in environments with robust institutions (e.g., strong rule of law, effective regulation, low corruption), the negative impact of very high liquidity creation on financial stability is mitigated.

**Control of Corruption:** In countries with better control of corruption, banks might face fewer pressures for politically motivated or non-commercial lending [1, 14, 35, 60], allowing them to allocate liquidity more efficiently and reduce credit risk. This would enhance the overall resilience of the banking sector, making it more capable of absorbing shocks even with high liquidity creation.

**Rule of Law and Regulatory Quality:** Stronger rule of law and higher regulatory quality would provide a more predictable and transparent operating environment [11, 12, 29, 50]. This would enable more effective enforcement of prudential regulations (e.g., capital adequacy, liquidity buffers like Basel III rules [5, 37]), which can curb excessive risk-taking associated with high liquidity creation. Banks operating under strong legal and regulatory frameworks are less likely to engage in "risk shifting" or "rent-seeking" behavior [3], which can undermine stability. This aligns with findings that institutional quality conditions the effect of bank regulations on stability [29].

**Government Effectiveness:** Higher government effectiveness would imply more stable macroeconomic policies and better public service delivery, reducing overall economic uncertainty and providing a more stable environment for banks to operate [19, 26]. This stability would allow banks to manage their liquidity transformation activities more prudently.

These findings would suggest that institutional quality acts as a critical shock absorber, enhancing the capacity

of African banking systems to manage the inherent risks of liquidity creation. In essence, strong institutions create a more favorable environment where the benefits of liquidity creation can be maximized while its potential downsides are contained, thereby promoting greater financial system resilience. The results would highlight that the relationship is not uniform across all African economies but is significantly shaped by the underlying governance and institutional frameworks.

### 3.4. Robustness Checks

To ensure the reliability of these hypothetical findings, various robustness checks would be performed:

**Alternative Measures of Variables:** Using alternative measures for bank liquidity creation (e.g., different classifications of on-balance sheet and off-balance sheet activities [27, 28]), financial stability (e.g., alternative Z-score specifications, different systemic risk metrics [4, 6, 32]), and institutional quality (e.g., individual WGI components instead of a composite index, or other governance indices [49]).

**Alternative Econometric Estimators:** Employing different dynamic panel data estimators (e.g., alternative GMM specifications, QML estimation [48, 55]) to ensure that the results are not sensitive to the chosen estimation technique.

**Sub-sample Analysis:** Conducting analyses on different sub-samples of African countries (e.g., by regional economic blocs, by income levels, or by legal origin [50]) to examine potential regional heterogeneity in the relationships.

**Controlling for Endogeneity:** Addressing potential endogeneity issues (e.g., reverse causality between FS and BLC, or omitted variables) through appropriate instrumentation strategies inherent in GMM or other advanced panel techniques.

The consistency of the non-linear relationship and the moderating role of institutional quality across these robustness checks would lend strong support to the core hypotheses, making the hypothetical results highly credible and policy-relevant for African economies.

## **D**ISCUSSION

The hypothetical findings of an inverted U-shaped relationship between bank liquidity creation (BLC) and financial stability (FS), significantly moderated by institutional quality (IQ), offer profound implications for banking theory, prudential regulation, and economic policy in African economies. This discussion interprets these results within the broader context of existing literature, highlights their practical relevance, acknowledges the inherent limitations of such a study, and proposes avenues for future research.

### 4.1. Interpretation of the Non-Linear Relationship

The observed inverted U-shaped relationship between BLC and FS strongly supports the theoretical notion that while liquidity creation is essential, there exists an optimal level beyond which it becomes detrimental to stability. At lower levels, banks fulfilling their core intermediation function by transforming illiquid assets into liquid liabilities contribute positively to financial stability. This is because they facilitate efficient capital allocation, reduce liquidity hoarding by economic agents [56, 59], and support real economic output and investment [18, 24]. A banking system that fails to create sufficient liquidity can stifle economic growth and potentially lead to a credit crunch, indirectly undermining financial stability by weakening the real economy.

However, the turning point of the inverted U-shape signifies a critical threshold. Beyond this optimal level, excessive liquidity creation leads to increased financial fragility. This "dark side of liquidity creation" [2]

manifests through several channels:

**Increased Maturity Mismatch:** Aggressive liquidity creation often involves greater reliance on short-term, volatile funding sources (e.g., wholesale funding) to finance long-term, illiquid assets (loans) [45]. This amplifies maturity transformation risk, making banks highly susceptible to funding shocks and bank runs [33, 46, 48, 52]. The case of Silicon Valley Bank serves as a recent stark reminder of such vulnerabilities [61].

**Heightened Risk-Taking Incentives:** High levels of liquidity creation can sometimes be a byproduct or even a driver of increased risk-taking by banks. When liquidity is abundant, banks might relax lending standards, extend credit to riskier borrowers, or engage in speculative activities, thereby increasing their exposure to credit risk and ultimately undermining their stability [35, 36].

**Systemic Risk Amplification:** When many banks simultaneously engage in excessive liquidity creation, it can lead to a build-up of systemic risk, where the failure of one institution could trigger a cascade of failures across the financial system [4, 41, 62]. The interconnectedness of banks through interbank markets and shared exposures amplifies this contagion risk [44, 62].

This non-linear dynamic implies a crucial trade-off for policymakers: promoting liquidity creation to foster economic growth while simultaneously preventing its excesses that could jeopardize financial stability. This finding aligns with the ongoing debate in financial regulation regarding the optimal balance between bank capital and liquidity [34, 37, 48].

#### 4.2. The Moderating Role of Institutional Quality

The most significant contribution of these hypothetical results is the demonstration of the powerful moderating role of institutional quality in shaping the relationship between BLC and FS. Strong institutional frameworks do not merely shift the entire curve; they fundamentally alter its shape, particularly mitigating the downside risks associated with high levels of liquidity creation.

**Enhanced Resilience through Control of Corruption:** In African economies where control of corruption is strong, banks are less likely to be influenced by illicit pressures in their lending decisions [1, 14, 35, 60]. This reduces the incidence of non-commercial loans and improves asset quality, thereby enhancing bank stability even when liquidity creation is high. Corruption, conversely, can lead to misallocation of liquidity, favoring connected parties over creditworthy projects, ultimately undermining financial soundness [35].

**Predictability and Enforcement via Rule of Law and Regulatory Quality:** Robust rule of law ensures that contracts are enforced, property rights are protected, and legal disputes are resolved fairly and efficiently [13, 50, 51]. This predictability reduces uncertainty for banks, allowing them to manage their liquidity and credit risks more effectively. High regulatory quality implies sound prudential regulations that are effectively implemented and supervised [11, 29]. This includes adherence to international standards like Basel III liquidity rules [5, 37], which aim to build resilience by requiring banks to hold sufficient high-quality liquid assets. In environments with strong regulatory quality, regulators can more effectively monitor banks' liquidity creation activities, detect excessive risk-taking, and intervene promptly to prevent crises [29, 54]. This acts as a crucial safeguard, allowing for higher levels of beneficial liquidity creation without incurring disproportionate stability risks.

**Stability from Government Effectiveness:** Effective governance and stable macroeconomic policies reduce overall economic and political uncertainty [19, 26, 31]. This creates a more conducive environment for banks to operate, reducing the likelihood of sudden shocks that could trigger liquidity crises or bank runs [43]. When governments are effective, they can implement consistent policies that support financial sector development

and stability, including robust supervisory guidance on corporate governance [54].

In essence, institutional quality acts as a crucial "shock absorber" and an "enabler." It enables banks to create more liquidity for the real economy without disproportionately increasing financial fragility, by providing the necessary governance, legal, and regulatory infrastructure to manage the inherent risks. This finding is particularly salient for African economies, given the wide spectrum of institutional quality observed across the continent [49, 54]. It suggests that financial sector reforms in Africa must go hand-in-hand with broader institutional reforms to achieve sustainable financial stability and foster inclusive growth [19, 26, 38].

#### 4.3. Policy Implications for African Economies

The findings carry significant policy implications for central banks, financial regulators, and governments in African economies:

**Tailored Prudential Regulation:** A "one-size-fits-all" approach to prudential regulation may be ineffective. Regulators must consider the specific institutional context of each country when designing and implementing liquidity and capital requirements. In countries with weaker institutional quality, more stringent liquidity buffers and capital requirements might be necessary to compensate for higher inherent risks [11, 12, 29]. Conversely, in environments with strong institutions, regulations could be more flexible, allowing banks to optimize liquidity creation.

**Strengthening Institutional Frameworks:** Governments must prioritize reforms aimed at improving institutional quality, particularly in areas like control of corruption, rule of law, and regulatory effectiveness. These reforms are not only crucial for overall economic development but are also fundamental for building a more resilient and stable financial system that can effectively manage liquidity risk [11, 12, 29, 38, 42, 54]. Efforts to curb corruption in lending [1, 14, 35, 60] and enhance judicial efficiency [50] are paramount.

**Macroprudential Policy:** Policymakers should actively employ macroprudential tools to manage systemic risks arising from liquidity creation [43]. This includes dynamic liquidity requirements, counter-cyclical capital buffers, and limits on maturity transformation, especially during periods of rapid credit growth or cyclical volatility of lending [40, 64]. The IMF's framework for macroprudential policy provides a useful organizing framework [43].

**Supervisory Capacity Building:** Regulatory bodies in African countries need continuous capacity building to effectively monitor banks' liquidity creation activities, assess their risk profiles, and enforce regulations. This includes developing sophisticated early warning systems for bank distress [53, 54] and addressing issues like non-performing loans [7].

**Promoting Transparency and Governance:** Enhancing transparency in bank operations and strengthening corporate governance within financial institutions are crucial. This can reduce information asymmetry and curb excessive risk-taking, particularly in politically uncertain environments [30, 31, 34, 63].

#### 4.4. Limitations and Future Research

While this conceptual review provides a robust framework, it is crucial to acknowledge its limitations and suggest avenues for future empirical research. As a theoretical exposition, it does not present new empirical data or statistical tests. The proposed relationships and moderating effects require rigorous econometric validation using comprehensive bank-level and country-level panel data from African economies.

Future empirical research should:

**Empirically Test the Non-Linearity:** Conduct rigorous econometric analyses using dynamic panel data models (e.g., System GMM, QML) to confirm the inverted U-shaped relationship between BLC and FS in African

contexts, precisely identifying the optimal threshold for liquidity creation.

**Quantify the Moderating Effect:** Empirically quantify the magnitude and direction of the moderating role of various institutional quality dimensions (e.g., individual WGI indicators) on this non-linear relationship. This could involve threshold regression models to identify specific IQ levels at which the relationship changes.

**Disaggregate Institutional Quality:** Explore the specific channels through which different aspects of institutional quality (e.g., legal origin [50], political cycles [30], board diversity [40]) influence the BLC-FS nexus.

**Consider Other Moderators:** Investigate other potential moderating factors, such as bank capital [34, 37, 48, 63], competition [17, 25, 60], bank ownership structures [64], and financial inclusion [62], which also play significant roles in bank stability.

**Focus on Systemic Risk:** Dedicate more empirical attention to the impact of BLC on systemic risk in African financial systems, utilizing advanced systemic risk measures [4, 6, 32] and network contagion models [62].

**Policy Effectiveness:** Evaluate the effectiveness of specific prudential policies (e.g., Basel III implementation) in managing liquidity creation and enhancing financial stability across diverse institutional environments in Africa.

By addressing these research gaps, future studies can provide more granular, evidence-based guidance for policymakers in African economies, enabling them to foster more resilient and growth-supportive banking sectors.

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