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Revisiting Solvency And Liquidity Analysis In Commercial Banks: A Literature Review With Insights From Emerging Markets

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Abstract
Solvency and liquidity are critical dimensions of financial stability and operational efficiency in commercial banking, particularly within the volatile and resource-constrained environments of emerging markets. This review synthesizes theoretical foundations and empirical research on the relationship between solvency and liquidity, focusing on their relevance to risk management, capital planning, and regulatory oversight. Drawing upon studies from diverse emerging economies including Jordan, Indonesia, Nigeria, and Pakistan this article explores the application of traditional metrics such as the debt-equity ratio (DER), capital adequacy ratio (CAR), current ratio (CR), and liquidity coverage ratio (LCR). The findings indicate a persistent reliance on static ratio analysis and limited integration of dynamic tools such as stress testing, real-time solvency dashboards, or macro-financial scenario modeling. The review highlights emerging trends in digital financial reporting, ESG-linked solvency concerns, and regulatory reforms under Basel III. Despite advances, significant gaps remain in the literature, particularly regarding integrated solvency–liquidity frameworks, cross-country comparisons, and the role of technology and sustainability. This paper concludes by outlining policy and practice implications for bank regulators, financial managers, and analysts, and calls for future research that bridges solvency and liquidity through dynamic, data-driven, and sustainability-oriented approaches. Addressing these gaps is vital for enhancing financial resilience, regulatory compliance, and sustainable banking development in emerging markets.

Keywords: Solvency, Liquidity, Emerging Markets, Financial Stability, Commercial Banks, Basel III, Risk Management

Introduction
The health of commercial banks is a critical pillar for economic growth, financial stability, and investor confidence in both developed and emerging economies. Among the various tools used to evaluate a bank's performance and stability, solvency and liquidity analysis remain foundational. These two constructs are essential not only for internal financial management but also for regulatory compliance, market evaluation, and macroprudential oversight (Diamond & Rajan, 2005; Basel Committee on Banking Supervision, 2013). In the context of emerging markets, where banking sectors often operate under volatile macroeconomic conditions and evolving regulatory environments, the relevance of solvency and liquidity assessments becomes even more pronounced (Ali & Ahmad, 2023; Dahiya & Yadav, 2022). Solvency refers to a bank's ability to meet its long-term obligations and is typically assessed using ratios such as the debt-to-equity ratio (DER), capital adequacy ratio (CAR), and interest coverage ratio. These indicators signal whether a bank can withstand prolonged stress or unexpected financial shocks (Ghosh, 2017; Rahman, 2017). Liquidity, on the other hand, reflects a bank’s capacity to meet short-term obligations and operational commitments. Ratios such as the current ratio, quick ratio, and the liquidity coverage ratio (LCR) introduced under

Basel III norms are widely employed to assess liquidity adequacy (Vento & Ganga, 2009; Diamond & Kashyap, 2016). A shortfall in either solvency or liquidity can lead to financial distress, regulatory penalties, or even bank failure, making their monitoring vital for financial sustainability (Berger & Bouwman, 2009; Khan et al., 2022). Over the past two decades, the banking landscape in emerging economies has undergone significant changes driven by post-crisis regulatory reforms, digitization, rising competition, and economic shocks such as the 2008 financial crisis and the COVID-19 pandemic. These disruptions have exposed structural weaknesses in solvency and liquidity frameworks, prompting academics and policymakers to revisit conventional assessment tools (Sahay et al., 2015; Alhosban et al., 2022). For instance, the pandemic highlighted the fragility of liquidity buffers and the urgency of having dynamic, real-time monitoring systems (Ameliana & Octafian, 2024; Airout et al., 2023). While traditional ratio-based analysis remains the dominant approach in financial statement interpretation, scholars argue for a more nuanced understanding that integrates macroeconomic linkages, digital liquidity tools, and risk-based capital buffers (Lalithchandra, 2021; Firdaus & Tanjung, 2022). This shift is particularly crucial in emerging economies where data quality, regulatory heterogeneity, and firm-level governance practices vary significantly (Abdulshakour, 2020; Dahiya et al., 2021). Liquidity and solvency are not isolated phenomena; they are interdependent and often move together during times of financial distress, influencing credit cycles and market confidence (Tafri et al., 2009; Marjohan, 2020). Despite the growing volume of literature on financial performance indicators, there is limited integrative work focusing specifically on how solvency and liquidity are jointly analyzed in the banking sector, especially in the context of emerging markets like Jordan, Indonesia, India, and Nigeria. Existing studies often analyze them in isolation, missing the synergistic insights that come from joint evaluations (Palenteng, 2022; Wang & Tang, 2024). The rapid digitization of financial reporting and the evolution of regulatory standards such as IFRS 9 and Basel III call for an updated literature review that captures both the theoretical advances and the empirical findings from recent years. Therefore, the present review article aims to synthesize and critically examine existing scholarly work on solvency and liquidity analysis in commercial banks, with a specific lens on emerging markets. It explores historical developments, theoretical underpinnings, and empirical patterns, while also identifying gaps, contradictions, and new directions for research and practice. By offering a structured, theme-based review, this article seeks to contribute to ongoing academic discourse and inform future regulatory, managerial, and investment strategies in banking sector evaluation.

Conceptual Framework of Solvency and Liquidity in Banking

In the realm of financial performance analysis, solvency and liquidity are foundational concepts that underpin a bank's ability to survive economic stress and fulfill its obligations. These constructs are not only relevant from a financial accounting perspective but also hold strategic significance for regulators, investors, and internal bank management. While both relate to a bank’s ability to meet obligations, solvency is primarily concerned with long-term sustainability, whereas liquidity focuses on short-term capacity to manage immediate financial needs (Ghosh, 2017; Edem, 2017).

Solvency: Definition and Indicators

Solvency refers to a bank's capacity to meet its long-term financial liabilities and is a direct indicator of its capital structure and financial health. The most widely used indicators include the Debt-to-Equity Ratio (DER), Capital Adequacy Ratio (CAR), and Interest Coverage Ratio.

The Debt-to-Equity Ratio reveals the proportion of debt used in financing assets relative to shareholders' equity, serving as a proxy for leverage and long-term financial risk (Rahman, 2017; Alshehadeh, 2021). The CAR, enforced under Basel norms, evaluates whether a bank has sufficient capital to absorb unexpected losses. According to the Basel III framework, commercial banks in emerging economies are required to maintain a minimum CAR of 8%, although some national regulators prescribe higher thresholds to account for systemic risks (BCBS, 2013). The Interest Coverage Ratio, another critical solvency measure, calculates the bank's ability to meet interest obligations from operating profits. A lower ratio suggests higher credit risk and potential solvency issues (Heikal et al., 2014). While these indicators are widely adopted globally, their interpretation in emerging markets requires adjustment to reflect country-specific risks, macroeconomic volatility, and capital mobility constraints (Oqaily & Alawin, 2019).

Liquidity: Definition and Indicators

Liquidity, on the other hand, represents a bank's ability to fulfill its short-term obligations as they become due, without incurring unacceptable losses. Key liquidity ratios include the Current Ratio, Quick Ratio, and the more advanced Liquidity Coverage Ratio (LCR) introduced in the Basel III reforms. The Current Ratio, calculated as current assets divided by current liabilities, reflects the general liquidity position but may be inflated due to inventory-heavy current assets (Madushanka & Jathurika, 2018). The Quick Ratio refines this by excluding inventories, providing a more immediate view of liquidity health. The Liquidity Coverage Ratio (LCR) is a regulatory metric that mandates banks to hold sufficient high-quality liquid assets (HQLA) to cover total net cash outflows over a 30-day stress period. The LCR is particularly relevant in post-crisis banking regulation and is increasingly adopted in emerging market banking supervision (Khan, 2018; Alali, 2019). In emerging economies, liquidity constraints are often intensified due to underdeveloped capital markets, reliance on deposit-based funding, and limited access to central bank liquidity facilities (Ali & Ahmad, 2023). This makes the careful monitoring of liquidity indicators critical, especially during macroeconomic shocks such as the COVID-19 pandemic, where liquidity risks sharply increased across sectors (Airout et al., 2023; Ameliana & Octafian, 2024).

Interdependence and Risk Perspective

Although solvency and liquidity are conceptually distinct, they are often interlinked in practice. A bank with high solvency may still face liquidity shortfalls if asset conversion is delayed, while liquidity-rich institutions may still be overleveraged, threatening long-term survival. This duality is captured in models such as the CAMELS framework (Capital Adequacy, Asset Quality, Management, Earnings, Liquidity, and Sensitivity), which integrates solvency and liquidity to assess bank soundness (Tafri et al., 2009). The interdependence also becomes evident during financial distress, where poor liquidity triggers solvency crises, as seen in numerous bank failures post-2008 and during the 2020 pandemic (Diamond & Rajan, 2005; Diamond & Kashyap, 2016). Regulatory mandates such as IFRS 9's Expected Credit Loss (ECL) model and Basel III's stress testing protocols require banks to proactively manage both liquidity and solvency risks under multiple scenarios (BCBS, 2013; IFRS Foundation, 2014). These frameworks represent a shift from reactive to preventive financial health assessment, emphasizing forward-looking capital and liquidity planning. In summary, understanding solvency and liquidity in commercial banking requires a layered approach one that combines traditional ratio analysis with dynamic, risk-adjusted, and regulatory-aligned frameworks. In emerging markets, this complexity is heightened by

economic volatility, digital transformation, and evolving policy environments, which this review article explores in the subsequent sections.

Literature Review on Solvency in Emerging Market Banks

Solvency, as a measure of a bank's ability to meet its long-term obligations, has been widely examined in the literature on banking performance. Studies across emerging markets reveal substantial variability in solvency outcomes due to divergent macroeconomic environments, regulatory maturity, capital structures, and systemic risk exposure. This section synthesizes key empirical and theoretical insights into solvency assessment, with specific attention to debt ratios, capital adequacy, and interest coverage, and how these metrics perform under stress conditions in emerging economies.

Solvency and Capital Adequacy: Empirical Insights

Solvency in the banking sector is often proxied by indicators such as the Debt-to-Equity Ratio (DER) and Capital Adequacy Ratio (CAR). In their cross-country study, Sahay et al. (2015) emphasized that emerging market banks often maintain lower capital buffers compared to advanced economies, exposing them to systemic fragility during downturns. Similarly, Wang and Tang (2024) analyzed manufacturing and financial firms in China and emphasized the complex interplay between leverage and debt repayment capacity, noting solvency pressures increase significantly during inflationary periods and credit crunches. In Jordan, Rahman (2017) examined solvency ratios such as DER and long-term debt-to-equity ratios across listed industrial firms and observed a negative correlation with profitability measures. This indicates that firms with higher leverage may struggle to sustain long-term obligations without eroding operational efficiency. A similar observation was made by Oqaily and Alawin (2019) who applied an intertemporal solvency model to evaluate the sustainability of Jordan's current account and fiscal obligations. Their findings point to structural weaknesses in debt-financed expansion strategies. A study by Dahiya, Weshah, and Aldahiyat (2021) focused on Jordanian manufacturing firms and concluded that higher solvency (i.e., lower leverage) positively impacted long-term financial performance. Conversely, Murdiansyah and Sari (2023), in their analysis of Indonesian healthcare firms, found no significant relationship between solvency and audit delay, implying that while solvency may reflect stability, its influence on operational transparency is not guaranteed.

Solvency during Crises and External Shocks

Solvency pressures in emerging markets tend to intensify during crises due to currency depreciation, rising interest rates, and withdrawal of foreign capital. Raj and Putri (2021), in their five-year panel analysis of Indonesian banks, found that solvency though stable in normal years deteriorated during periods of macroeconomic turbulence, affecting stock prices and investor sentiment. Similarly, Marjohan (2020) showed that in Indonesian manufacturing firms, solvency ratios such as debt-to-asset (DAR) significantly impacted profitability, with higher leverage leading to reduced return on assets (ROA) during economic contractions.

In the post-COVID period, Airout et al. (2023) highlighted how Jordanian industrial firms saw a notable improvement in net income and total assets, but this was not uniformly reflected in solvency ratios. The study attributes this disconnect to deferred liabilities and state-backed stimulus packages that temporarily masked underlying long-term risks. Alhosban et al. (2022) further noted that despite apparent profitability gains, many industrial

enterprises in Jordan still lacked sufficient long-term debt coverage, exposing them to future solvency risks.

Solvency Regulation and Basel Alignment

The adoption of Basel III norms has compelled many emerging market regulators to strengthen their capital adequacy monitoring frameworks. The Basel Committee on Banking Supervision (2013) introduced stricter guidelines around Tier 1 capital and counter-cyclical buffers to ensure greater solvency resilience. Implementation challenges persist in developing regions. For instance, Alali (2019) found that Jordanian commercial banks often operate close to minimum capital thresholds, increasing vulnerability to credit default shocks. Further, Khersiat (2021) explored the effect of applying IFRS 15 in Jordanian telecom companies and found a moderate impact on solvency indicators like ROA and ROE, emphasizing how accounting reforms also influence solvency metrics. The study suggested that regulatory alignment alone is insufficient unless supported by governance reforms, risk management improvements, and enhanced disclosure practices.

Synthesis and Limitations in Solvency Literature

While the body of research on solvency in emerging markets is growing, several limitations persist. First, many studies adopt a short time horizon and fail to account for structural changes in regulatory and fiscal environments. Second, the emphasis is largely on quantitative ratio analysis, with limited integration of qualitative factors such as governance quality, audit integrity, or political risk. Third, solvency is often studied in isolation, without accounting for liquidity linkages, which may lead to incomplete assessments of financial stability.

Lastly, a lack of cross-country comparative studies limits our understanding of how contextual factors (e.g., financial inclusion, currency regimes, capital controls) shape solvency differently across emerging economies. A more integrative approach, combining longitudinal solvency data, macroeconomic indicators, and firm-level governance variables, is essential to enhance the explanatory power and policy relevance of solvency research.

Literature Review on Liquidity Management in Commercial Banks

Liquidity management plays a vital role in the financial health and operational sustainability of commercial banks. It reflects the institution’s ability to meet short-term obligations without compromising asset quality or resorting to distress borrowing. In the context of emerging markets, where capital markets are less developed and central bank support mechanisms may be constrained, liquidity management becomes particularly crucial during periods of economic volatility or crisis (Khan et al., 2022; Lalithchandra, 2021). This section reviews empirical studies and conceptual advancements on liquidity in commercial banking, with special emphasis on liquidity ratios, regulatory norms, and crisis-era dynamics.

Liquidity Ratios in Practice

Traditional liquidity ratios such as the Current Ratio (CR), Quick Ratio (QR), and Cash Ratio have long been used to assess a bank's ability to convert assets into cash to meet immediate liabilities. Their application to banks requires caution due to the unique nature of banking assets and liabilities. For instance, while CR is useful in industrial analysis, banking institutions require more refined measures such as the Liquidity Coverage Ratio (LCR)

introduced under Basel III to ensure high-quality liquid assets (HQLA) are sufficient to withstand 30-day stress scenarios (BCBS, 2013; Diamond & Kashyap, 2016).

Madushanka and Jathurika (2018) highlighted the importance of liquidity ratios for shareholder wealth maximization, emphasizing that inefficient liquidity management often leads to suboptimal performance. Ali and Ahmad (2023) demonstrated that liquidity creation by banks significantly contributes to GDP growth in Pakistan, underscoring its macroeconomic impact. Similarly, Alali (2019), in a study of Jordanian banks, found that legal liquidity ratios directly influenced return on equity, although excessive liquidity held for compliance reduced profitability.

Post-Crisis Liquidity Management: COVID-19 and Beyond

The COVID-19 pandemic marked a turning point in how banks approach liquidity management. Global lockdowns, supply chain disruptions, and market panic triggered mass withdrawals and disrupted normal cash flows. Airout et al. (2023) observed that liquidity pressures during the pandemic forced Jordanian SMEs and industrial firms to adopt unconventional cash retention strategies. Despite improved net profits in 2020–21, many firms avoided investing due to heightened uncertainty and liquidity hoarding.

Ameliana and Octafian (2024) analyzed the case of PT Gudang Garam Tbk and found that pandemic-induced stress revealed significant weaknesses in liquidity strategy, prompting calls for digital forecasting tools and scenario-based liquidity planning. Alhosban et al. (2022) noted a similar trend in Jordan, where computerized financial statement analysis improved real-time liquidity management during and after the pandemic, though many firms still lacked adequate buffers for sustained disruptions.

Regulatory Perspective and Market Discipline

The Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR), both introduced by the Basel Committee post-2008, are now global standards for liquidity risk management. Implementation challenges persist in emerging markets due to weak enforcement capacity and fragmented reporting mechanisms (Khan, 2018). Alshehadeh (2021), studying 16 Jordanian banks, found that while most complied with liquidity mandates, profitability was negatively affected when liquidity reserves were too conservative.

Airout et al. (2023) also emphasize the role of disclosure quality in strengthening market discipline around liquidity. Transparent reporting of off-balance sheet exposures, maturity mismatches, and intra-group liquidity support is still underdeveloped in many regions. This impairs investor confidence and raises systemic vulnerability during market shocks.

Interplay with Profitability and Bank Performance

Liquidity management also significantly influences profitability. Studies such as Firdaus and Tanjung (2022) on Indonesian infrastructure firms and Edem (2017) on Nigerian banks report a negative relationship between excess liquidity and profitability, suggesting an opportunity cost in holding idle assets. Conversely, Khan et al. (2022) found that liquidity challenges in Pakistan were directly tied to stock return volatility, indicating the broader financial market impact of poor liquidity risk management.

In Jordan, Alali (2019) and Airout et al. (2023) suggest that efficient liquidity strategies must strike a balance between regulatory compliance and operational flexibility. Holding liquidity purely to meet LCR targets, without linking it to asset-liability maturity profiles or cash flow projections, often results in inefficient capital allocation.

Gaps in Liquidity Literature

Despite the volume of liquidity-focused studies, several research gaps remain. First, few studies have examined the dynamic behavior of liquidity under multiple macro scenarios or cross-sectoral linkages. Second, limited use of real-time liquidity monitoring tools such as ERP-integrated dashboards and AI-based liquidity forecasting models constrains the applicability of academic models to practice. Third, while the Basel III framework has improved awareness, compliance levels and interpretation of liquidity metrics remain inconsistent across jurisdictions.

Interlinkages Between Solvency and Liquidity: Integrated Perspectives

While solvency and liquidity are distinct constructs in financial analysis, they are deeply interrelated in banking operations. Solvency ensures long-term financial sustainability by focusing on capital structure and the ability to repay debts, whereas liquidity emphasizes the short-term capacity to meet immediate obligations. Empirical evidence and banking crises throughout history suggest that deficiencies in one often cascade into failures in the other (Diamond & Rajan, 2005; Tafri et al., 2009). In the context of emerging markets characterized by weaker safety nets, capital market inefficiencies, and volatile macroeconomic environments understanding the interplay between solvency and liquidity is crucial for holistic bank performance assessment and risk management.

Theoretical Nexus: Solvency as a Foundation for Liquidity

Solvent banks are more likely to maintain market confidence, allowing them to raise short-term funds during liquidity shortages. In contrast, insolvent banks often suffer from depositor panic, credit rating downgrades, and liquidity freezes even if they hold short-term assets. Vento and Ganga (2009) argue that solvency acts as a precondition for liquidity access in capital-constrained environments. In markets like Jordan and Indonesia, solvency deterioration has often led to restricted access to interbank lending markets, exacerbating liquidity crunches.

Diamond and Kashyap (2016) extend this argument using modified models of the classic Diamond-Dybvig framework, showing that banks with stronger equity buffers (i.e., solvency) are better positioned to avoid liquidity-induced runs. In essence, solvency can mitigate the risk of self-fulfilling liquidity crises.

Empirical Studies on Solvency-Liquidity Interaction

Tafri et al. (2009), in a study of Malaysian banks, found significant interaction between liquidity ratios (CR and QR) and capital adequacy indicators (CAR), noting that banks with both high liquidity and strong capital base were more resilient during the global financial crisis. Similarly, Rahman (2017) in Jordanian industrial sectors observed that debt-heavy firms with weak liquidity positions were more likely to experience declining ROA and rising default risks.

Palenteng (2022) examined the interplay of liquidity and solvency in PT Indofood (Indonesia), concluding that solvency had a positive effect on profitability, while liquidity showed a negative or insignificant effect unless tightly managed. These findings reinforce that holding excess liquidity without capital discipline can create inefficient resource allocation.

A multi-country study by Ghosh (2017) found that banks with lower solvency (i.e., high leverage) relied more on short-term borrowings to manage liquidity, thereby increasing refinancing and rollover risks. This pattern was most evident in African and South Asian emerging markets, where regulatory arbitrage and weak governance allowed excessive risk-taking.

CAMELS and Composite Rating Systems

The CAMELS rating system which stands for Capital Adequacy, Asset Quality, Management, Earnings, Liquidity, and Sensitivity to Market Risk provides one of the most widely accepted frameworks for evaluating the interrelationship between liquidity and solvency (Sarker, 2005). Regulatory bodies in emerging markets like Bangladesh, Nigeria, and Jordan have adopted modified CAMELS versions to monitor bank soundness.

In Jordan, Alshehadeh (2021) found that while liquidity indicators improved post-Basel III, many banks showed deterioration in capital adequacy due to rising non-performing loans. This indicates that improving liquidity alone is insufficient unless supported by a strong solvency cushion. Conversely, undercapitalized banks were found to aggressively manage short-term cash buffers, thereby inflating liquidity ratios to maintain regulatory compliance.

Risk-Based Approaches and Stress Testing

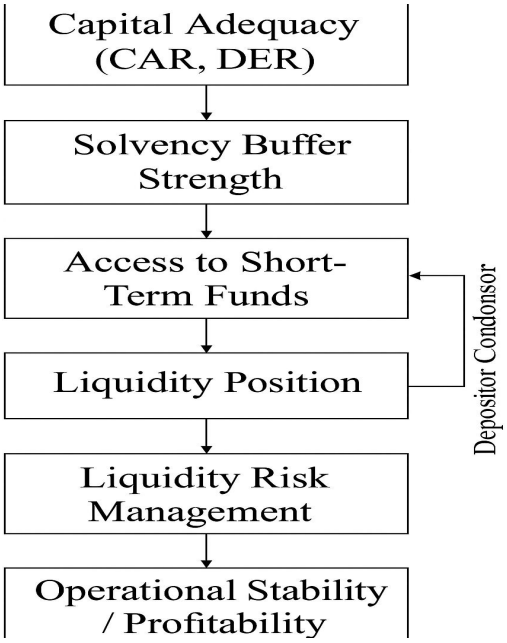
Modern risk management frameworks increasingly rely on integrated stress testing that simultaneously evaluates the impact of adverse scenarios on both liquidity and solvency positions. Under the Basel III regime, banks are required to conduct Liquidity Stress Tests and Reverse Stress Tests that assess the breaking points of liquidity in case solvency deteriorates (BCBS, 2013).

Dahiya et al. (2021) call for embedding dual-index risk dashboards in financial reporting systems in Jordan, integrating indicators like the Liquidity Coverage Ratio (LCR) and Capital Adequacy Ratio (CAR) into a single solvency-liquidity stress matrix. Such a system would allow banks to assess capital drawdowns needed to survive 30-day liquidity squeeze or sudden asset write-downs.

Summary of Key Findings

- Solvency and liquidity are mutually reinforcing in banking stability.
- Weak solvency can lead to funding disruptions, liquidity shortages, and reputational risk.
- Overemphasis on liquidity (e.g., hoarding HQLAs) without ensuring long-term capital sufficiency can reduce profitability and operational flexibility.
- Emerging markets need to develop integrated reporting tools and dual-risk dashboards that evaluate solvency and liquidity holistically.

Figure 1: Conceptual Flowchart of Solvency–Liquidity Interlinkages in Commercial Banks



As depicted in Figure 1, capital adequacy and solvency strength directly influence a bank's access to short-term funds and liquidity position. In turn, these factors affect risk management effectiveness and overall operational stability. Depositor confidence serves as a feedback loop, reinforcing liquidity resilience under stress scenarios.

Table 1: Gaps in the Literature

Gap Area	Description
Digital Reporting	Lack of empirical models linking AI/ERP systems with solvency forecasting
Integrated Models	Few studies jointly model liquidity and solvency under macro shocks
Temporal Scope	Short timeframes, lack of longitudinal or post-crisis solvency tracking
Static Analysis	Excessive reliance on static ratios without stress-testing or cash flow modeling
ESG Integration	Absence of studies connecting ESG performance to liquidity/solvency risk

Table 2: Summary of Key Studies on Solvency and Liquidity in Emerging Markets

Several empirical studies from emerging markets have investigated the individual and joint impact of solvency and liquidity on bank performance. These studies employ diverse methodologies, variables, and regional contexts, offering critical insights into the interrelationship between the two constructs. A summary of key findings from notable studies is presented in Table 1.

Author(s)	Country / Region	Key Variables Used	Methodology	Major Findings

Tafri et al. (2009)	Malaysia	CAR, CR, ROA	Panel regression	Solvency and liquidity jointly affect profitability.
Ghosh (2017)	Multi-country (Asia)	DER, LCR, Profitability	Fixed effects panel	High leverage increases liquidity dependence.
Alali (2019)	Jordan	DER, ROA, ROE	Descriptive + correlation	Solvency has stronger correlation with profitability.
Palenteng (2022)	Indonesia	CR, DER, Profitability	Multiple regression	Solvency has positive, liquidity negative impact.
Dahiya et al. (2021)	Jordan	LCR, CAR, ESG	Composite Index	ESG-related disclosures affect capital adequacy.
Khan (2018)	Pakistan	LCR, Net Interest Margin	Time series regression	Liquidity management linked to interest income.

Policy and Practice Implications

The insights gathered from recent literature on solvency and liquidity in commercial banks particularly within the context of emerging markets carry significant implications for financial regulators, banking institutions, investors, and researchers. Addressing the limitations of current analytical approaches and leveraging emerging trends can lead to stronger financial governance, better capital planning, and more resilient banking systems. This section presents policy and practice implications across three main stakeholder groups.

Implications for Regulators and Policymakers

Regulatory bodies such as central banks, securities authorities, and banking commissions in emerging economies play a pivotal role in setting minimum standards for solvency and liquidity. The literature highlights that mere compliance with Basel norms is not sufficient without contextualized and proactive regulation.

- Enhanced Stress Testing: Regulators must mandate comprehensive stress testing frameworks that evaluate both solvency and liquidity under adverse macroeconomic scenarios. These should be integrated into supervisory review processes (BCBS, 2013; Dahiya et al., 2021).
- Dynamic Solvency Thresholds: Rather than static capital adequacy thresholds, policymakers may consider adopting counter-cyclical capital buffers that adjust based on systemic risks (Diamond & Kashyap, 2016).
- Transparency and Digital Disclosure: Authorities should enforce real-time disclosure of solvency and liquidity positions, including maturity mismatches, off-balance-sheet items, and contingent liabilities, using digitized financial reporting systems (Alhosban et al., 2022).

- Inclusion of ESG and Non-Financial Risks: With rising attention on ESG performance, regulators should begin embedding green solvency metrics into capital adequacy assessments, especially for banks involved in climate-exposed financing (Tarigan & Valerie, 2023).

Implications for Bank Management and Internal Risk Teams

Commercial bank managers, CFOs, and risk officers must move beyond a narrow focus on profitability and embrace integrated risk management models that balance capital structure and liquidity buffers.

- Integrated Solvency–Liquidity Dashboards: Banks should invest in real-time dashboards that track liquidity coverage ratio (LCR), capital adequacy (CAR), and stress-test outputs simultaneously (Dahiya et al., 2021; Airout et al., 2023).
- Scenario-Based Financial Planning: Liquidity hoarding or excess leverage can distort performance. Instead, institutions should conduct rolling cash flow simulations, aligning solvency planning with funding needs under various scenarios (Palenteng, 2022).
- Diversified Capital Sources: Emerging market banks should strengthen their long-term funding base, including subordinated debt, Tier 2 capital, and retained earnings, to improve solvency resilience (Ghosh, 2017).
- Governance Integration: Financial decisions tied to solvency and liquidity must be governed by internal policies that include board-level oversight, ensuring accountability in capital allocation and risk appetite statements (Rahman, 2017).

Implications for Investors and Financial Analysts

Equity investors, credit analysts, and institutional stakeholders require better tools and frameworks to assess the financial resilience of banks especially in under-regulated emerging markets.

- Beyond Static Ratios: Analysts should supplement traditional ratio analysis with trend evaluations, peer benchmarking, and stress-adjusted solvency scores, using tools like CAMELS or Altman Z-scores (Tafri et al., 2009).
- Risk-Adjusted Return Models: Instead of focusing purely on ROE or EPS, investors should evaluate risk-adjusted returns, accounting for leverage, capital volatility, and liquidity gaps.
- Focus on Disclosures: Given inconsistencies in financial reporting, stakeholders must scrutinize notes to accounts, contingent liabilities, and liquidity notes in quarterly/annual reports for red flags.

In summary, the practical value of solvency and liquidity analysis lies not just in monitoring ratios, but in embedding a culture of integrated risk thinking across the financial ecosystem. Regulators must enforce transparency and adaptability, banks must modernize their risk systems, and investors must demand more comprehensive disclosures. These combined efforts are essential for strengthening financial stability and governance in emerging banking markets.

Future Research Directions

To address the emerging gaps identified in this review, future research should prioritize:

- Development of dynamic solvency–liquidity interaction models, particularly under stress scenarios tailored to emerging markets;
- Cross-country comparative studies to uncover contextual differences in regulatory frameworks, capital structures, and crisis responses;

- Integration of digital technologies and AI into financial forecasting, particularly for liquidity simulation and capital stress testing;
- Incorporation of ESG indicators into solvency and liquidity assessments, especially in line with global sustainability mandates;
- Sectoral analyses comparing conventional vs. Islamic banking institutions, which may exhibit distinct patterns of liquidity and solvency behavior.

Overall, the importance of a holistic, data-driven, and context-sensitive approach to solvency and liquidity analysis cannot be overstated. As emerging markets continue to expand their banking sectors and face new waves of financial and environmental shocks, the alignment of academic inquiry with regulatory innovation and industry best practices will be critical. Strengthening this alignment will not only improve the resilience of individual institutions but also support broader goals of financial inclusion, stability, and sustainable development.

Conclusion:

This literature review critically examined the dual themes of solvency and liquidity in commercial banks, with a focused lens on emerging market economies. While both constructs are essential to the financial stability and risk profile of banking institutions, the review reveals that they are often analyzed in isolation, leading to partial or fragmented interpretations of bank performance and resilience. The empirical and conceptual works surveyed highlight the interdependent nature of solvency and liquidity where a deficiency in one often precipitates or worsens weaknesses in the other.

In emerging markets like Jordan, Indonesia, Nigeria, and Pakistan, banks often operate under macroeconomic volatility, evolving regulatory regimes, and limited access to diversified capital markets. These conditions magnify the importance of integrated financial health assessments that go beyond static ratio analysis. While conventional measures such as the debt-to-equity ratio (DER), capital adequacy ratio (CAR), current ratio (CR), and liquidity coverage ratio (LCR) remain widely used, they often fail to capture time-bound stress dynamics, regulatory arbitrage, or digital transformation effects.

The review also emphasizes several emerging trends, including the adoption of digitized financial reporting tools, the growing relevance of ESG-linked solvency concerns, and the need for real-time liquidity stress-testing frameworks. The literature still lacks robust models that embed these evolving elements into solvency–liquidity diagnostics, particularly tailored for emerging economies.

Therefore, future research must aim to bridge these gaps through:

- Cross-sectional and longitudinal studies incorporating macro-financial linkages,
- Real-time and AI-driven solvency–liquidity models,
- Sectoral comparisons including Islamic banking systems, and
- Integration of sustainability and governance dimensions into financial performance analysis.

Ultimately, strengthening solvency and liquidity frameworks in emerging market banks is not just a regulatory necessity but a strategic imperative for ensuring systemic stability, investor confidence, and sustainable banking growth.

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