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A Decade of Asset Quality Pressures: Evaluating Non-Performing Loans in the Ghanaian Banking Industry (2016–2025)

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Abstract: The Ghanaian banking industry, central to domestic capital allocation, is currently constrained by escalating credit risk, characterized by a substantial volume of non-performing loans (NPLs) that threatens institutional solvency and sector-wide liquidity. A decade of asset quality pressures in Ghana (2016–2025)" summarizes a turbulent economic era where Ghana's banking and financial sectors faced persistent vulnerability, primarily measured by exceptionally high non-performing loan (NPL) ratios. The purpose of this study is an effort to investigate the contribution of the effects of macroeconomic instabilities, bank specific factors; other industry factors, high fiscal deficits and accumulated government legacy debt over the years that had contributed the uptick of non-performing loans of the Ghanaian banking industry over period 2016-2025. Ghana recorded the average non-performing asset ratio of 18.14% over the past decade well above the global acceptable level of 10% (Demirguc-Kunt and Detriagache (1998). Ghana's stubbornly high non-performing asset (NPA) ratio has long been a major vulnerability for its banking sector. Academic literature, such as the foundational study by Demirgüç-Kunt and Detragiache (1998), highlights that high NPA levels are a primary trigger for systemic banking crises. The study finds that high non-performing loan dynamics in Ghana's banking industry stem from four interrelated domains: macroeconomic headwinds, bank-specific credit governance weaknesses, legal and judicial delays in debt recovery, and broader fiscal imbalances. The study further reveals that until the government pays off all legacy debts to non-energy and energy sector, and addresses the macro-economic instabilities, high fiscal deficits while banking sector deals with poor credit risk management practices and weak corporate governance practices, banking sector could not improve the endemic high non-performing loans in the sector. High and rising NPL ratios have severely limited the ability of the banking sector to provide new credit and support the economy.

Keywords: *Banking Sector; Non-Performing Loans; Macroeconomic Factors; Government Arrears, Bank-Specific Factors; Industry Factor; High Fiscal Deficits; Ghana*

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I. INTRODUCTION/ BACKGROUND

The banking sector plays a pivotal role in the economic development and stability of a country, particularly in developing nations like Ghana, where financial systems are predominantly bank-based. Banks act as the primary financial intermediaries, converting deposits into productive investments, which is essential for facilitating economic growth (Ambarkhane et.al,2022). The banking sector is a keystone to any financial system. The smooth functioning of the banking sector ensures the healthy condition of an entire economy. In the process of accepting deposits and lending, loans banks create credit. The funds received from the borrowers by way of interest on loan and repayments of principal are recycled for raising resources (Agarwala, N and Agarwala, V, 2019). Ghanaian banking sector plays a pivotal role in driving economic growth and development, The level of non-performing loans (NPLs) best indicates the soundness of the banking sector of a country. The Ghanaian banking sector, pivotal to the nation's economic progress, experienced considerable distress because of escalating non-performing loan volumes. The accumulation of non-performing assets poses a severe threat to the solvency of Ghanaian banks and dampens overall economic activity. Persistent high levels of non-performing assets continue to strain financial intermediation, impairing capital adequacy and impeding broader economic development in Ghana. High levels of non-performing assets weaken bank balance sheets and restrict lending across Ghana.

A Non-Performing Loan (NPL) is a loan in which a borrower has stopped making scheduled principal or interest payments for a specified period—typically 90 days or more under regulations like those of the Bank of Ghana or international banking standards. The 2016–2025 timeframe covers massive structural shifts in Ghana's financial sector,

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including the 2017–2018 Bank of Ghana banking sector clean-up, the economic fallout from the COVID-19 pandemic, the 2022–2023 Domestic Debt Exchange Program (DDEP), and subsequent macroeconomic recovery phases. Non-performing loan (NPL) ratios in Ghana have experienced dramatic volatility during this period—peaking at crisis levels (such as 26.7% in early 2024) before recovering to around 18.7%–18.9% by late 2025. Substantial government payment arrears (including energy sector/IPP debts and contractor arrears) starved counterparties of cash flow. Sovereign debt restructuring heavily impacted bank balance sheets, diminishing liquidity and constraining private-sector credit growth Historical exposure to connected lending, weak credit appraisal, and legal bottlenecks in collateral enforcement.

There was significant ownership disparity in the non-performing assets in the banking sector. Privately domestic owned banks /state owned-owned banks (such as Agricultural Development Bank, National Investment Bank, Consolidated Bank Ghana, Prudential Bank and Universal Merchant Bank) carried significantly higher NPL ratios compared to foreign- and Nigerian-owned subsidiaries (like UBA, Zenith, and Access Bank). State-owned and domestically controlled banks in Ghana face significantly higher non-performing loan (NPL) ratios compared to foreign- and regional-owned subsidiaries due to legacy exposures, sector-specific lending mandates, poor and weak credit risk management practices and economic pressures. Historically, domestic and state-controlled institutions have faced political pressures or stakeholder expectations to extend credit to politically exposed entities, state-owned enterprises (SOEs), or domestic contractors. This has left them heavily exposed when government arrears accumulated (such as multi-billion dollar and cedi arrears to energy producers and contractors). State-owned and specialized domestic banks (like the Agricultural Development Bank and National Investment Bank) are frequently mandated to support high-risk, strategic sectors of the economy—such as agriculture, local manufacturing, and state-backed infrastructure—regardless of commercial risk profiles. Foreign-owned and regional cross-border subsidiaries (such as Nigerian-owned banks like UBA, Zenith, and Access Bank) typically enforce stricter, centralized credit-scoring protocols, automated risk controls, and conservative provisioning policies. They also face less institutional pressure to bail out distressed domestic entities. Domestic banks often hold significant portions of local private-sector or public-sector debt vulnerable to severe cedi depreciation and high domestic interest rates, which frequently trigger loan downgrades and spike NPL ratios.

The structurally high level of NPLs in Ghana could be explained by a range of factors, including government arrears creating debt repayment difficulties for domestic suppliers, macroeconomic volatility, poor credit risk management practices, and a legacy of problem loans that remain unresolved or are not written off partly because of weak legal systems. Growing non-performing assets have been a recurrent problem in the Ghanaian banking sector was due to macroeconomic instabilities such as higher interest rates, higher inflation, unemployment, persistent depreciation of the local currency, high fiscal deficits and accumulation and non-payment of arrears due to contractors and service providers on time by the Ministries, Municipals, Agencies and Departments (MMDAs) as well as bank specific factors including poor credit risk management, irresponsible lending, poor supervision and weak governance poor underwriting skills, weak credit reference processes and weak understanding of the sectors where the banks were involved in lending, for example in the areas of financing the local buying agencies in the cocoa industry.

Commercial banks were highly exposed to credit risk, since lending accounts for the bulk of assets and it has grown in an environment of weak credit risk management and enforcement of creditor rights. Other industry factors such as weaknesses in the legal, regulatory and judicial systems have all contributed to the uptick in non-performing loans in the banking sector over past decade. Protracted legal disputes, persistent adjournment in credit related cases by courts and weaknesses in the Borrowers and Lenders Act 2020 (Act 1052). Elevated non-performing loans (NPLs) pose a significant systemic risk, constraining private-sector credit intermediation and dampening aggregate economic growth in Ghana. Non-performing loans (NPLs) had eroded the profitability and threatened the solvency of banks, and when a sufficiently large volume of loans were affected, they potentially threatened financial sector stability in the country.

The high NPLs had hampered credit growth and affected the profitability and solvency of the banks as well. High ratio of non-performing loans to total loans impacts banks' lending in several ways. A bank plagued with a high stock of NPLs is likely to prioritize internal consolidation and improving assets quality over provision of new credit. A high NPL ratio requires greater loan loss provisions, reducing capital resources available for lending and denting bank profitability. Asset quality deteriorated severely in 2016 (NPL ratio rising to 19.1%), leading to comprehensive Asset Quality Reviews (AQR) by the Bank of Ghana (BoG). Following the insolvency of several banks and recapitalization exercises, NPLs peaked around 23.5% in April 2018 before moderating to 18.2% by year-end 2018 due to mandatory loan write-offs. Between the period 2019-2023, the banking sector was hit by Covid 19 Pandemic and domestic debt exchange programme.

The sector faced persistent headwinds from macroeconomic volatility, Cedi depreciation, high inflation, and the impact of the 2022–2023 DDEP, which eroded capital buffers. The industry NPL ratio surged to an all-time high of 26.7% in March 2024, before closing out 2024 at 21.8% as high interest rates (peaking above 30%) and inflation constrained debt-servicing for SMEs and retail borrowers. Driven by aggressive write-offs (clearing roughly GHS 13.9 billion in bad debt) and tighter underwriting, the NPL ratio improved marginally to 18.90% in December 2025. Over the past decade, the macro-economic factors, bank specific factors and industry factors have all contributed the fully fledged banking crisis due to up-tick in the high non-performing loans in the banking sector Demirguc-Kunt and Detriagache (1998). The recent economic and financial crises

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have been the focus of the attention of professionals and academics due to their essential economic consequences.

These crises have arisen mainly due to the increase in NPL in the banking system since; by eliminating the structural profitability of banks, they are forced to limit credit in the system. Financial entities that operate in stable, well-regulated markets and with acceptable levels of economic growth do not usually have high NPL rates. NPLs can have various causes, including the following factors: Economic downturns and fluctuations in interest rates can exert significant pressure on borrowers, making it increasingly challenging for them to fulfil their loan obligations. The main source of income of banks is through the interest earned on loans and advances and repayment of the principal. If such assets fail to generate income, then they are classified as non-performing loans (NPL). Successive administrations in Ghana have perennially grappled with the macroeconomic destabilization—most notably inflationary pressures—stemming from the monetization and financing of persistent fiscal deficits. Covid 19 pandemic-induced defaults have added to legacy asset-quality issues linked to loss-making state-owned energy companies and bulk oil distribution companies that suffered from currency depreciation and delays in government payments to non-energy sector debts have all added to up-tick in the higher non-performing ratios over the past years. High and rising NPL ratios had severely limited the ability of the banking sector to provide new credit and support the economy. Theoretical and empirical evidence demonstrates that non-performing loans (NPLs) exert an adverse contractionary effect on private-sector credit provision across both aggregate banking systems and individual banking institutions, manifesting as a systematic reduction in new lending among balance sheets carrying elevated impaired asset ratios. NPL accumulation induces a credit-rationing response across the banking sector, where individual institutions burdened with high non-performing ratios systematically curtail new credit disbursement. Ghana recorded the average non-performing asset ratio of 18.14% over the past decade well above the global acceptable level of 10% (Demirguc-Kunt and Detriagache (1998). Ghana's stubbornly high non-performing asset (NPA) ratio has long been a major vulnerability for its banking sector. Academic literature, such as the foundational study by *Demirgüç-Kunt and Detragiache (1998)*, highlights that high NPA levels are a primary trigger for systemic banking crises.

II. LITERATURE REVIEW

The issue of NPLs has been a major area of concern for the lenders and the policymakers. Various research studies have been made to understand the causes contributing to the rise in NPLs, measures that should be taken to resolve the issue in its nascent stage and reforms that have come into effect to reduce the piling up of NPLs. Hennie and Sonja (2009) define NPLs as assets not generating income. This is when principal or interest is due and left unpaid for 90 days or more. Pilbeam (1998) defined a non-performing loan as loan that is in default or close to being in default.

A loan is said to be in default when it fails to make the repayments of principal and or interest specified in its loan contract and has no intention of repaying in the future. According to the International Monetary Fund (IMF,2020), high levels of NPL can hinder the ability of banks to lend, which subsequently suffocates economic growth. NPLs have been found to be affected by macro variables, such as GDP growth, unemployment and inflation, and bank-related variables, such as bad management and market structure (Beck et al., 2015; Anastasiou et al., 2019). Staehr and Uuskula (2020) show that many macroeconomic and macro-financial variables are leading indicators for non-performing loans in the EU countries, even years ahead, and higher GDP growth, lower inflation and lower debt are robust leading indicators of a lower ratio of non-performing loans in the future. Ozili (2020) finds that more profitable banks witness higher NPLs regardless of them being systemic or non-systemic and secondly, systemic banks (GSIBs) have fewer NPLs during economic booms and during periods of increased lending, while non-GSIBs experience higher NPLs during periods of increased lending.

Piatti and Cincinelli (2019) find that, first, when the NPLs ratio remains below the threshold value estimated endogenously, an increase in the quality of monitoring has a positive impact on the NPLs ratio, and second, if the NPLs ratio exceeds the estimated threshold, the relationship between the NPLs ratio and quality of monitoring assumes a positive value and is statistically significant. Literature classification has been carried out based on focus research areas such as determinants of NPL and impact of NPLs on the banking industry. Elevated levels of non-performing loans (NPLs)—loans that are in or close to default—are a common feature of many banking crises. The literature acknowledges that elevated NPLs impair bank balance sheets, depress credit growth, and delay output recovery (Aiyar et al., 2015; Kalemli-Ozcan, Laeven, and Moreno, 2015, IMF 2016).

A literature review on Non-Performing Loans (NPLs) reveals that determinants fall into macroeconomic (GDP, inflation, interest rates, unemployment), bank-specific (capital adequacy, loan-to-deposit ratio, profitability, bank size, management quality), an institutional/structural (moral hazard, poor due diligence, wilful defaults, government policies) categories, all impacting loan repayment and bank health, with recent studies highlighting the pandemic's effect and macro-financial linkages. When borrowers struggle to repay their debts, banks are saddled with high non-performing loan (NPL) ratios. These NPLs tie up significant amounts of banks' capital, hindering their ability to lend new loans and jeopardizing the overall health of the financial system (Gyimah-Brempong and Quartey, 2018).

Sapkota (2004) observed that non-performing loans (NPLs) pose a more significant challenge for government-owned banks compared to private banks. The NPL ratio of around 60% in two major government banks highlights a critical issue. Efforts to address this through financial reforms included placing the management of these banks under foreign companies, but the NPL ratios did not improve significantly.

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Non-Performing Loans (NPLs) are a critical metric for assessing the financial health of banks, reflecting the quality of their loan portfolios and exposure to financial risk. NPAs are facilities or loans which generate no income.

Whereas Fofack (2005) used NPAs and bad loans interchangeably, Berger and De Young (1997) described NPLs as 'problem loans. In the broader context, NPLs can be considered as loans that are outstanding in both interest and principal for a period contrary to the terms and conditions spelt out in the loan agreement. There are varied descriptions of NPLs in the literature. Alton and Hazen (2001) described NPLs as loans that are 90 days or more past due or no longer accruing interest. Similarly, Caprio and Klingebiel (1990) considered NPLs as loans which for a relatively long period of time do not generate income. This comprises of the principal and interest on the debt for at least 90 days. In the literature, determinants of NPLs have been categorized into macroeconomic factors, bank-specific factors, and those caused by debt crises. NPLs and its interactions with macroeconomic performances are grounded in theoretical business cycle models with an explicit role for financial intermediation (Williamson, 1985).

Naturally, discrepancies in financial regulation and supervision affect banks' behavior and risk management practices which are important in explaining cross-country differences in NPLs. The macroeconomic environment inevitably influences borrowers' balance sheets and their debt-servicing capacity. Thus, adverse economic shocks coupled with high cost of capital and low interest margins (Fofack, 2005) have been identified to cause NPLs. According to Goldstein and Turner (1996), build-up of NPLs is mostly attributed to a number of factors which include economic downturn, macroeconomic volatility, terms of trade deterioration, high interest rate, excessive reliance on overly high-priced inter-bank borrowings, and moral hazard. Determinants of Non-Performing Loans (NPLs) in banking are split into bank-specific (internal) factors like poor credit management, loan growth, profitability, capital adequacy, size, and efficiency, and macroeconomic (external) factors such as economic downturns, high inflation, unemployment rates, exchange rate volatility, and interest rate changes, all affecting borrowers' ability to repay and banks' lending quality. NPLs are defined and reported differently across countries. There is no international standard of definition. In countries reporting financial soundness indicators (FSIs) to the IMF (2019) the FSI Compilation Guide recommends recording loans as nonperforming when (1) payments of interest or principal are past due by 90 days or more; or (2) interest payments equal to 90 days or more have been capitalized (reinvested into the principal amount), refinanced, or rolled over (payment delayed by agreement); or (3) evidence exists to reclassify them as nonperforming even in the absence of a 90-day past due payment, such as when the debtor files for bankruptcy or there are other signs of significant financial difficulty of the borrower (IMF 2019a).

Karunakar et al. (2008) discuss the various factors that boost NPLs, their size, their effect on Indian banking operations and suggest measures to control the curse on the banking industry. Use of suitable credit assessment and risk management methods is the key to solving the problem of NPL accumulation. Macroeconomic variables, which were found to affect banks' asset quality, include the exchange rate, interest rate, and inflation. In this regard, exchange rate depreciation might have a negative impact on asset quality, particularly in countries with a large amount of lending in foreign currency to un-hedged borrowers, and interest rate hikes affect the ability to service the debt, particularly in case of floating rate loans (Louzis, Vouldis and Metaxas, 2010). Interest rate is one of the crucial determinants of NPLs. Rise in interest rates shows an increase in the volume of borrowers' debt and makes debt servicing more expensive and difficult, as a result NPLs expanded (Boss-et al 2009).

Contrary to these findings, NPLs diminish by reducing interest rate, and resultantly, bank's earnings also decrease. Similarly, Ozili & Outa (2017) evidenced the negative association between interest rate and NPLs in Malaysia. Siddiqui et al (2012) find that instability in interest rate is mainly influencing on the volume of non-performing loans in Pakistani banking sector. The research conducted by Umar & Sun (2018) identify various crucial factors attached with non-performing loans and found that exchange rate is one of the important and significant determinants of NPLs. Similarly, Zia & Huma (2015) documented that exchange rate has statistically significant effects on NPLs. On the same lines, Khemraj and Pasha (2009) proved a strong association between effective exchange rates and NPLs. There are various responsible factors of loan losses in banking sectors of the USA, and exchange rate is one of them (Gambera 2000). GDP growth rate is also a critical macroeconomic determinant of NPLs (Us 2017). Umar & Sun (2018) proved inverse relation between GDP growth rate and NPLs; shows higher economic growth will decrease the ratio of NPLs in the country. A similar relation between GDP growth and NPLs is obtained by Buncic & Melency (2013). NPLs decrease with a rise in GDP growth and increase with a fall in GDP growth due to recession in economy (Fernandez De Lis et al 2000).

By using panel data regression Amuakwa- Mensah and Boakye-Adjei (2015) found that bank-specific variables including NIM, bank size and Loan growth were more affecting the non-performing loans of small banks of Ghana, as compared to macroeconomic variables like GDP, inflation rate, exchange rate. The political situation of a country is a critical factor affecting NPLs and working of banking system. Many studies such as (Boudriga et al 2009) proved that organizational atmosphere and political uncertainty have a strong impact on ratio of NPLs. Similarly, Wilson (2000) pointed out that top management of banking sector is influenced by different social and political pressure groups, especially in developing economies. In this situation, loans are not given on a merit basis, they are given on political basis. Ultimately, these loans are not utilized productively and not refunded properly. Creane et al (2006) examined different political factors causing non-performing loans in various countries. He pointed out that weak judicial empowerment, bureaucracy, and poor implementation of credit policy are the most important factors of increasing volume of NPLs, and it

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is the main cause of banking failure. Numerous studies on NPLs have exclusively concentrated on three sources of determinants; macroeconomic, bank specific and industry factors are responsible for the changes in NPLs of banking institutions. When a borrower defaults on a loan and fails to pay. In the literature, determinants of NPLs have been categorized into macroeconomic factors, bank-specific factors, and those caused by debt crises. NPLs and its interactions with macroeconomic performances are grounded in theoretical business cycle models with an explicit role for financial intermediation (Williamson, 1985). Naturally, discrepancies in financial regulation and supervision affect banks' behavior and risk management practices which are important in explaining cross-country differences in NPLs. Mpofu and Nikolaidou (2019) examine the macroeconomic determinants of credit risk in the banking system of SSA economies over 2000–2016 and show that a deterioration in the economic environment leads to higher credit risk in the banking sector in the region. NPL determinants are both macroeconomic and microeconomic. In a recent review of this large literature, Manz (2019) distinguishes two broad categories of NPL determinants: macroeconomic factors and bank-specific variables. Macroeconomic factors encompass variables such as GDP growth, monetary aspects, price levels, and terms of trade. Bank-specific determinants include cost efficiency, capitalization, lending behavior, the economics of information (moral hazard, agency problems), and corporate governance.

The macroeconomic environment inevitably influences borrowers' balance sheets and their debt-servicing capacity. Thus, adverse economic shocks coupled with high cost of capital and low interest margins (Fofack, 2005) have been identified to cause NPLs. According to Goldstein and Turner (1996), build-up of NPLs is mostly attributed to a number of factors which include economic downturn, macroeconomic volatility, terms of trade deterioration, high interest rate, excessive reliance on overly high-priced inter-bank borrowings, and moral hazard make monthly principal and interest payments for a predetermined amount of time, the loan is considered non-performing (NPL). According to Demirgüç-Kunt and Detragiache (2002), regulatory authorities tend to emphasize micro–macro prudential regulatory frameworks for banking stability more than they do on institutional and governance factors that affect financial reporting quality are out of money or face other obstacles, the loan becomes non-performing. In a later development on the association between NPLs and real growth of GDP, Dimitrios et al. (2016) found that there is a positive link between these two variables. Data employed in their study was quarterly data for the year 1990 to 2015 of fifteen Euro-area countries. Their findings are consistent with Beck et al., (2015) who found that real growth of GDP, exchange rate, lending interest rate and share prices have significantly influence on the ratio of NPL. According to Taswan et al. (2023), banks often categorize loans as non-performing when principal and interest repayments are past due for more than 90 days or in accordance with the parameters stated in the loan agreement. Once a loan is labeled as non-performing (NPL), there is far less chance that it will be repaid. Even so, a borrower who has already had a debt declared non-performing may begin to make repayments on it. The non-performing loan turns into a re-performing loan in these circumstances (Jolevski, 2017).

Bank-specific factors and country-specific (macroeconomic) factors. Keeton and Morris (1987) proposed that not only local economic conditions influence the loss rates of banking institutions, but bank-specific factors such as risk-taking behaviour and credit management contribute to the loss rates. In their seminal work, Berger and De Young (1997) examined the link between loan quality, cost efficiency, and bank capital by using a sample of US commercial banks by testing four hypotheses concerning the direction of causality. These include bad luck, bad management, skimping, and moral hazards. Berger & De Young (1997) argued that the bad management hypothesis suggests that low-cost efficiency will develop before or because of rising NPLs. This is justified by the relationship between management quality and awareness of credit scoring, collateral valuation, and borrower monitoring. The issue of NPLs has been a major area of concern for the lenders and the policymakers. Various research studies have been made to understand the causes contributing to the rise in NPLs, measures that should be taken to resolve the issue in its nascent stage and reforms that have come into effect to reduce the piling up of NPLs.

Factors driving NPLs fall into two broad groups: macroeconomic conditions (such as inflation, interest rate and real GDP growth) and bank-specific factors (capital ratios, quality of risk management). Low GDP growth stands out as a key driver of NPLs. Numerous studies on NPLs have exclusively concentrated on two sources of determinants that are responsible for the changes in NPLs of banking institutions: bank-specific factors and country-specific (macroeconomic) factors. Keeton and Morris (1987) proposed that not only local economic conditions influence the loss rates of banking institutions, but bank-specific factors such as risk-taking behaviour and credit management contribute to the loss rates. Espinoza and Prasad (2010) investigated NPLs determinants for 80 banks in Gulf Cooperation Council from 1995 to 2008. They revealed that NPLs in these sample banks are determined by both macro-factors and bank-specific factors. GDP and interest rates appeared to be the dominant macro-factors, while capital size, credit growth and efficiency were found to be significant bank-specific factors. In addition, they also found that the conditions of global financial markets have an influence on the NPLs of these sample banks.

Louzis et al., (2012) investigated the factors that drive NPLs in nine biggest banks in Greece employing quarterly data 2003 to 2009. Analysis was done on three categories of loans: consumer loans, business loans, and mortgage loans. They found that real growth of GDP, unemployment rate, public debt, and the lending rates do influence NPLs of banks. The effect of these determinants on NPLs depends on loans categories. Specifically, consumer loans were most sensitive for changes in lending rates, business loans to real GDP growth, and mortgage loans were the least sensitive to changes in macroeconomic variables. With respect to bank-specific determinants, their results indicate that these

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determinants' effect on the NPLs varies between different categories of loans. Among macroeconomic factors, economic growth, interest rates, inflation, unemployment, and exchange rates have been significant (King and Plosser, 1982; Bernanke and Gertler, 1999). Numerous studies conclude that NPL increases when the economic environment deteriorates (Cifter et al., 2009; Ali and Daly, 2010; Louzis et al., 2012). For example, Mitrakos and Simigiannis (2009) analyzed the relationship of certain macroeconomic factors with the likelihood of debt default in Greece. They found that unemployment and income level are highly correlated with the probability of debt default. Espinoza and Prasad (2010) used a sample of 80 Gulf Cooperating Council entities (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) from 1995 to 2008. they concluded that the NPL increases as economic growth decreases and interest rates rise. Bercoff et al. (2002) also provided similar evidence like that of USA after examining the instability of the Argentinean Banking system over the 1993–1996 periods. They discovered from their study that NPLs are affected by both bank-specific factors and macroeconomic factors by using survival analysis. Moreover, using a dynamic model and a panel dataset covering the period 1985–1997 to investigate the determinants of NPLs of Spanish commercial and saving banks, Salas and Saurina (2002) disclosed that real growth in GDP, rapid credit expansion, bank size, capital ratio, and market power explain variation in NPLs

Ali and Dali (2010) conducted a comparative study of the U.S. and Australia from 1995 to 2009. They determined that the main factors affecting NPL were gross domestic product (GDP), interest rates, industrial production, and total indebtedness and bank-specific factors on NPLs in 14 Eurozone countries, spanning from 2000 to 2008. They found that there is a strong correlation between NPLs and these two categories of determinants. Capital adequacy ratio, which represents risk-taking behavior of banks, was found to be statistically negative significant on NPLs. Using a sample of 85 banks from Italy, Greece, and Spain for the period 2004 to 2008, Messai and Jouini (2013) found that the growth of GDP and banks' profitability have negative influence on the NPLs, whereas, the rate of unemployment, real interest rates, and credit quality affect NPLs positively. In a later development on the association between NPLs and real growth of GDP, Dimitrios et al. (2016) found that there is a positive link between these two variables. Data employed in their study was quarterly data for the year 1990 to 2015 of fifteen Euro-area countries.

Their findings are consistent with Beck et al., (2015) who found that real growth of GDP, exchange rate, lending interest rate and share prices have significantly influence on the ratio of NPLs. In addition, Mpofu and Nikolaidou (2018) suggest that real GDP growth rate is an important macroeconomic variable that significantly influences NPLs. Their analysis indicates an inverse relationship between GDP growth rate and ratio of non-performing loans. Other macroeconomic variables such as inflation rate, domestic credit to private sector by banks as a percentage of GDP, global volatility, and trade openness are significantly positively related to the NPLs. IMF country reports DP/2021/014 (2021) are used to pinpoint the sources of the identified NPLs episodes. These causes could be loosely grouped into (1) adverse macro-financial shocks, (2) poorly conceived macroeconomic policies, (3) problems originating in the banking sector itself. and (4) other structural issues. Jabbouri and Naili (2019) tested the effect of bank-specific and macroeconomic determinants on NPLs across 98 banks from ten emerging countries in MENA, during 2003 and 2016. Their study revealed bank size, ratio of capital adequacy, bank-operating efficiency, profitability of the prior year, growth of GDP, inflation, unemployment, as well as public debt are the key determinants of NPLs in the region. However, growth of loans has an insignificant effect on the behavior of non-performing loans. Likewise, Alshebmi et al., (2020) examined the relationship between the non-performing loans and selected bank and macroeconomic determinants of twelve Saudi commercial banks from 2009 to 2018. They found a negative correlation between NPLs and return on assets, growth of GDP, liquidity risk and credit risk of their sample banks. Unlike the results found by Jabbouri and Naili (2019), NPLs and capital adequacy ratio relationship is insignificant in the study performed by Alshebmi et al., (2020). In his study on emerging economies for the year 2000 to 2013, Bayar (2019) grouped the variables he employed into three categories: macroeconomic variables, institutional quality variable and bank-specific variables.

Garr (2013) conducted an in-depth analysis including bank-specific, industry-specific and macroeconomic determinants of credit risk in Ghana during 1990 to 2010 stated that management inefficiency was a major concern, while Treasury bill, inflation and discount rate did not have a significant influence on credit risk

Sameer and Kamra (2013) assessed the state of NPA in three major banks from 1997-2010. The study observed that one of the main reasons behind the piling of NPA is weak legal environment and politically motivated policy framework. Further, institutional quality appeared to be negatively related to NPLs which supports findings by Boudriga et al. (2010). Studies used by Kjosevski and Petkovski (2017), Us (2018) and Laryea et al., (2016), all confirmed that there is a link between macroeconomic and bank-specific variables with NPLs of their sample banks data from countries of other regions mentioned above found similar results. As for Asian region, Zhang et al., (2017) tested the impact of spatial spillover on NPLs for commercial banks in 31 Chinese provinces using data for the year 2005 to 2014. Their study revealed that the impact of spatial spillover plays an important role in shaping NPLs of banks in China. Consistent with studies using data from other regions mentioned above, the GDP growth and unemployment rate are significant factors in affecting NPLs of commercial banks in the provinces. Demirguc-Kunt and Detragiache (1998) argue that banking crises tend to erupt when the macroeconomic environment is weak, particularly when growth is low, and inflation is high. From the above literature, we can conclude that NPLs are driven by macroeconomic and bank-specific factors regardless of where the countries' data came from. Kalemli-Ozcan, Laeven, and Moreno, (2015), IMF (2016) noted that theoretical literature acknowledges

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that elevated NPLs impair bank balance sheets, depress credit growth, and delay output recovery drawing on the existing literature, this section outlines the inter-linkages between non-performing loans and economic performance. After reviewing several studies on the worldwide episodes of banking distress and banking crisis, Demirguc-Kunt and Detragiache (1997) concluded that any country whose ratio - non-performing loans to total assets in the banking system exceeding 10% could be classified as fully fledged crisis and of systemic nature.

Theoretically, fiscal deficit and interest rate contagion have assumed importance through mainstream economic policies in both advanced and emerging economies. Given the growing global financial market integration, it is assumed that the macroeconomic effects of rising interest rate due to fiscal slippages could spread globally; which may lead to crowding out of the interest-sensitive components of private spending (Correia-Nunes and Stemitsiotis 1995; Chakraborty 2007). Auerbach et al., (2002) examine positive relationship between fiscal deficit and interest rate; concluding that interest rate may remain high as a result of persistent fiscal imbalances that may affect capital stock accumulation in the economy. In Ghana, empirical reviews on the determinants of interest rate are scanty except for the seminal works of Bawumia et al., (2005), Aboagye et al., (2008), Kwakye (2010), Sheriff and Amoako (2014). A closer look at the Ghanaian economy shows a pass-through effect from fiscal policy to the retail interest rate contrary to the monetary policy (Bawumia 2010). The rippling effect of the fiscal policy on the economy has featured in various research themes and policy debates in Ghana. It is argued that the market lending rate may adjust disproportionately to policy expectations of the government (Ford and Laxton 1999; Loloh 2011). In their paper, Sheriff and Amoako (2014) show that fundamental macroeconomic indicators such as inflation and fiscal deficit play significant role in the high interest rate spread in Ghana. Ghana's fiscal policies have continuously resulted in deficits past decade. With government revenues lagging, this created sustained budget deficits which were financed mainly from the banking system. A study by Roman and Bilan [2015) on EU28 countries, for the period 2000–2013 demonstrated that budgetary consolidation results in a low- budget deficit or high- budget surplus and, thereby, deteriorates the bank portfolios showed that non-performing loans have a significant positive relationship with government budget balance and sovereign debt. The growing prevalence of loans not made in developing economies, as evidenced by the works of Laeven and Valencia (2013), suggests a direct correlation with macroeconomic instability resulting from inadequate regulatory frameworks.

Sarkar and Nahar (2017) unearthed an important perspective of ownership structure and credit risk in the form of non-performing loans in 32 banks of Bangladesh. The study disclosed that more Government interference was adding significantly to the bad loans and the Government, the Management and Policymakers should take some strong actions to tackle this major concern of increasing NPA. Chavan and Gambacorta (2016) observed one-percentage-point association in loan growth and NPL in Public and Private sector banks of India. The study also stated that more capitalized banks were risk-averse during the study period. The sensitivity of NPL due to interest rate and overall environment of the economy was one of the other findings of the study. Bhaskaran et al. (2016) in their paper have compared the NPAs of public sector banks and private sector banks over a period of ten years (2004-2013). From their study, it is evident that private sector banks are performing better than public sector banks in reducing the level of NPAs. The authors propose that banks should be proactive in adopting structured NPAs management policy where prevention of NPAs receive priority. Singh (2013) in the investigation on the position of Indian commercial banks with regard to NPAs finds that these poor-quality loans are a major problem for the public sector banks, which show a consistent rise over the years

III. DESIGN/METHODOLOGY/APPROACH

The study is a desk-based systematic literature/policy review. It uses a structured, transparent, and reproducible process to locate, critically appraise, and synthesize existing academic studies, government reports, and policy documents rather than collecting new primary data (such as running lab experiments, surveys, or interviews). A review of publicly available reports, case studies, secondary data and literature on non-performing assets from a variety of Ghanaian and international contexts comprised the methodology. However, due to the dearth of literature on non-performing details/information in the Ghanaian context, international case studies have been analyzed. The critical review covers publicly available reports on determinants of non-performing assets, macro-economic factors, banks specific; and industry factors of the Ghanaian banking sector over the period 2016-2025 were conducted using a range of related literatures and additional sources from Bank of Ghana, IMF country reports such as academic research and textbooks. To do a literature review and draw a judgment (Taswan et al., 2023).

- *Overview of the Non-Performing Asset Ratios in the Ghanaian Banking Sector Over the Period 2016-2025*

Over the period 2016–2025, Ghana's banking sector non-performing loan (NPL) ratios experienced significant volatility, driven by the 2017–2018 banking sector clean-up, the COVID-19 pandemic, macroeconomic shocks, and the Domestic Debt Exchange Program (DDEP). Compared to the Sub-Saharan Africa countries, Ghana has historically recorded high levels of non-performing loans (NPLs) in the banking sector. A decade of asset quality pressures in Ghana (2016–2025)" summarizes a turbulent ten-year period during which Ghana's banking sector battled severe, systemic non-performing loans (NPLs). Throughout this decade, bad loans routinely crippled bank balance sheets, forcing the industry into an uneven cycle of regulatory shutdowns, macroeconomic bailouts, and emergency debt restructurings. This decade of persistent asset quality deterioration was driven by a complex mix of government default arrears, severe macroeconomic shocks, and structural weaknesses within commercial lending

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The structurally high level of NPLs in Ghanaian banking sector could be explained by a range of factors, including government arrears creating debt repayment difficulties for domestic suppliers, macroeconomic volatility, domestic debt exchange program, poor credit risk management practices, and a legacy of problem loans that remain unresolved or are not written off partly because of weak legal systems. Non-Performing Assets (NPAs or NPLs) have historically been a significant challenge in Ghana's banking sector, leading to instability, insolvency of some banks, and a need for strong regulatory intervention, with causes including weak governance, economic slowdowns, and high production costs, though recent Bank of Ghana (BoG) measures aim to control and reduce these risks, showing resilience. The main source of income of banks is through the interest earned on loans and advances and repayment of the principal. If such assets fail to generate income, then they are classified as non-performing assets (NPA). According to the Bank of Ghana, NPA is defined as a credit facility in respect of which the interest and/or instalment of principal is "past due" for a specified period. Generally, if the loan payments have not been made for a period of 90 days, the asset is classified as non-performing asset. Based on how long the asset has been non-performing, banks are required to sort the non-performing assets in one of the following categories:

- Sub-standard asset: If an asset has been non-performing for less than 12 months;
- Doubtful asset: If an asset has been non-performing for more than 12 months; and
- Loss assets: Assets where losses have been identified by the bank, auditor or inspector and have not been fully written off.

The generation of poor loans in the books of banks is not a favourable event for the banking industry as it affects the size and soundness of the balance sheet. There is an unfavorable impact on the level of return on assets as well. Large amounts of profits must be provisioned against the doubtful and bad loans, which reduces profitability. Banks are even burdened with the increasing level of carrying costs of NPL accounts, which could have been used for any other profitable purpose. The financial institutions are also desired to maintain a certain capital adequacy level to strengthen their net worth. Though this issue is bad news for the banking industry, in recent times from the newspaper reports, it is evident that this problem has taken a serious toll on the banking space. Ghana faced an unprecedented health and financial crisis in 2022/2023 severely hurt credit quality and raised non-performing loans from already high levels compared to countries in Ecowas Sub region like Nigeria, Cote d'Ivoire, and Burkina Faso. Côte d'Ivoire and Togo are performing well, with controlled NPL ratios of 6.4% and 6.6%, respectively. Nigeria's banking sector recorded a rise in non-performing loan ratio stood at 7% on 31st December 2025 breaching the prudential limit of 5% following the withdrawal of regulatory forbearance measures introduced by Central Bank of Nigeria during Covid-19 pandemic. As at 31st December 2025, Burkina Faso's the non-performing loan ratio stood at 8.8% which was classified as high among the West African Monetary Union nations as against Ghana's non-performing loan ratio stood at 18.90% at 31st December 2025.

Ghana has recorded the average non-performing asset ratio of 18.14% over the past decade well above the global acceptable level of 10% (Demirguc-Kunt and Detriagache (1998). According to Demirguc-Kunt and Detriagache (1998) the Ghanaian banking sector could be classified as fully-fledged banking crisis and of a systemic nature because of average NPL ratios of 18.07% as against the global acceptable NPLs ratio of 10%. Ghana's high non-performing loan (NPL) ratios over the past decade stemmed from protracted government legacy debt, weak macroeconomics (high inflation, slow GDP growth, currency issues, high fiscal deficit), poor bank practices (weak risk management, bad governance), and sector-specific issues, including large payment arrears to contractors, challenges in loan recovery/foreclosures, all led to eroded bank profits and systemic risk. Elevated inflation and high real interest rates made it harder for borrowers to repay loans in the banking sector. A sluggish economy reduced business profitability, impacting loan servicing. A weakening local currency (Ghana Cedi) increased the burden of foreign currency-denominated loans. Large government deficits indirectly strained the economy.

Bank-specific weaknesses that contributed to high non-performing loans (NPLs) and the broader banking crisis in Ghana over the past decade include poor corporate governance, weak risk management practices, and severe capital and liquidity impairments. Data review on the non-performing loans in the banking sector from 2016 - 2025 indicated the rising trend over the period. The average non-performing loans in the banking sector from 2016 - 2025 is 18.07%, with the lowest figure of 14.7% in 2015 and the highest figure of 22.17% in 2017. This is an indication of the sector being in a fully- fledged crisis as a result of general repayment challenges on the part of borrowers reflecting general weak macro-economic imbalances in the form higher inflation, higher policy rates associated with higher lending rates, persistent depreciation of the local currency against the major trading currencies, higher energy cost and harsh business environment. According to Demirguc-Kunt and Detragiache (1997) posited that any country whose NPLs exceeds 10%, that country's banking sector is in fully fledged crisis.

The NPL ratio (including the loss category) increased to 14.7 per cent at end 2015 from 11.0 per in 2014, mainly on account of the general slowdown in economic activity and challenges posed by the worsening energy crisis. Adjusting for the fully provisioned loan loss, the NPL ratio stood at 6.8 per cent in 2015, compared with 5.3 per cent in 2014. The pace of domestic economic activity marginally slowed down in 2015 relative to 2014, largely because of the energy sector challenges, especially on industry. According to the GSS, real GDP grew by 3.9 per cent compared with 4.0 the year due to pass-through effects of a series of upward adjustments in utility tariffs and petroleum prices, as well as depreciation of the domestic currency. Consequently, headlines rose from

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17.0 per cent in the preceding year. For both the years 2014 and 2015 upward adjustment of utility tariffs, depreciation of the domestic currency as well as inflation impacted negatively on the banking sector' non-performing loans. The quality of loans on the banks' books generally worsened in 2016. Non–performing loans (NPLs) increased by 69.4 percent from GH¢ 3.6 billion in July 2015 to GH¢ 6.1 billion in July 2016. This translated into an NPL ratio of 19.1 percent, up from 13.1 percent in July 2015. The worsened NPL ratio was attributed to a number of factors, including the general slowdown in the economy, increasing cost of production due to high utility tariffs and loan portfolio reclassification by some banks. The high non-performing loans in the banking sector were largely due to the general slowdown in the economy, and high cost of production especially from high utility tariffs. With the onset of payments to reduce energy sector related SOE debts, the proportion of banks' NPLs attributable to the public sector declined from 3.9 percent in December 2015 to 3.2 percent in December 2016.

The private sector, however, contributed 96.8 percent of the total banking sector's non-performing loans as of December 2016, up from 96.1 percent in December 2015, while accounting for 85.1 percent of total credit in December 2016 compared with 87.3 percent of credit received in 2015.

An Asset Quality Review (AQR) by the Bank of Ghana in 2016 revealed severe asset deterioration and provisioning shortfalls across several local banks, representing a combined capital need of roughly 1.6% of GDP. Results of an Asset Quality Review (AQR) of the banking industry review over the past decades showed that some banks had impaired capital leading to capital erosion below the required regulatory levels. Consequently, such banks lacked sufficient capital to support the risks inherent in their asset base and had no capital buffers to withstand further losses that could arise from external shocks. The level of NPLs associated with the private enterprises was driven mainly by indigenous enterprises, which received 61.1 percent of credit to private enterprises but accounted for 78.9 percent of NPLs as of December 2016. Households' share of private sector credit declined from 14.8 percent to 13.4 percent while its contribution to NPLs declined from 6.8 percent to 4.4 percent over the review period (Bank of Ghana Banking Sector Summary January 2017).

The non-performing loan ratio stood at 17.30% as at 31st December 2016. According to Bank of Ghana's banking sector development report revealed that the non-performing loan ratio increased from 17.3% in December 2016 to 22.7 in December 2017. Banks' stock of non-performing loans increased from GH¢6.14 billion as at end-December 2016 (39.0% year-on-year growth) to GH¢8.58 billion in December 2017 (39.8% year-on-year growth). In addition to the marginal pickup in the year-on-year growth in the stock of NPLs, the increased NPL ratio was attributable to a slowdown in industry loans (from 17.6% in December 2016 to 6.4% in December 2017). Adjusting the industry's NPLs for the fully provisioned loan loss category, the ratio stood at 10.8 percent in December 2017 compared with 8.4 percent in December 2016. NPLs peaked near 23.5% in early 2018 before dropping to 18.2% by December 2018, aided by the Bank of Ghana (BoG) recapitalization and the resolution of insolvent banks.

According to Bank of Ghana's banking sector development report in December 2019 reported that the banking sector non-performing loan ratio improved from 18.2% in December 2018 to 14.7% in December 2019, the decline in the ratio was due to the combination of loan recoveries as well as further write- off. The industry's asset quality improved significantly during the period under review. The stock of the industry's Non-Performing Loans (NPLs) declined further by 5.2 percent to GH¢6.30 billion in December 2019, following a contraction of 18.9 percent a year earlier. The positive effect of the decline in the stock of NPLs on the NPL ratio was influenced by a strong pick up in gross credit within the review period, with a resultant decline in the NPL ratio to 14.7 percent in December 2019 from 18.2 percent in December 2018. The industry's NPL ratio adjusted for the fully provisioned loss loan category also declined to 6.7 percent in December 2019 from 10.2 percent in December 2018. Continued implementation of the ongoing loan write-off policy, intensified loan recoveries, and enhanced risk management practices, could support further reduction in the industry's stock of NPLs. In Ghana, the system's NPL ratio fell from above 20 percent in mid-2018 to 14.7 percent at the end of 2019, with additional write-offs accounting for about 3 percentage points according to the Bank of Ghana (2018).

The NPL ratio accordingly inched up from 14.7 percent in December 2019 to 15.7 percent in December 2020, after which it improved to 14.7 percent at year-end 2019 on account of improved credit growth and loan write-offs during the last quarter. The stock of NPLs increased by 9.8 percent year-on-year to GH¢7.1 billion at end-December 2020, compared with a contraction of 3.0 percent in December 2019. Banks also provided support and reliefs in the form of loan restructuring and loan repayment moratorium to cushion customers severely impacted by the pandemic, which in turn moderated the likely severe adverse impact the pandemic would have had on banks' asset quality. The COVID-19 economic and health crisis might have triggered a new wave of NPL increases. Economic restrictions and other disruptions (including lock-downs, curfews, and physical distancing measures) that were put in place to stem the spread of the virus have led to lower demand, higher costs of doing business, and income losses, which have resulted in some firms and households defaulting on loan repayments.in Total outstanding loans restructured by banks as at December 2020 amounted to GH¢4.5 billion, about 9.4 percent of the industry loan book. Regulatory guidance and monitoring procedures have been put in place to assess developments in this regard. According to Bank of Ghana's banking sector development report (2020) reported that the quality of assets within the banking sector marginally declined during the year due to the pandemic-induced loan repayment challenges and slowdown in credit growth in 2020. According to Bank of Ghana report (2020) the non-performing loan ratio declined marginally to 15.7% in December 2020 from 14.7% in December 2019.

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According to Bank of Ghana's report the banking industry's asset quality improved during the period under review following the decline in the NPL ratio from 15.2 percent in December 2021 to 16.22 percent in December 2022. Ghana's economy showed signs of weaknesses with the various international credit rating agencies downgraded the economy that led to slowdown of GDP growth, declined in confidence among businesses and consumers. The higher inflation, higher policy rate with the associated higher lending rates and persistent depreciation of the local currency against the major trading currencies impacted negatively on non-performing loans. Over the course of 2022, the Ghana Cedi depreciated against all the major trading currencies like US$, Euro and Great British pound sterling. While the Ghana Cedi was exchanged for GHC6.02 at the beginning of the year it ended at GHC 8.6 to US$1 that represented 42.8% depreciation. The industry's NPL stock, increased from GH¢8.2 billion in December 2021 to GH¢10.4 billion in December 2022, partly reflecting the revaluation of foreign currency NPLs and the deterioration in some domestic currency loan portfolios (BoG Monetary Policy Report, BOG Research Department – January 2023).

The IMF Country report 24/030 (01/2024) observed that the government had accumulated significant arrears in both energy and non-energy sectors in the past decade that contributed the higher non-performing loans in the banking industry over the past decade. Asset quality risks were elevated in December 2023, reflecting the lingering impact of the 2022 macroeconomic challenges including higher inflation and local currency depreciation on the banking sector. Notwithstanding the moderation in growth in the stock of non-performing loans (NPL), the industry's NPL ratio increased to 20.7 percent in December 2023, from 16.22 percent in December 2022. As documented in IMF Country Report No. (24/030 2024), the multi-year accumulation of sovereign arrears in the energy and non-energy sectors has historically catalyzed banking sector fragility. Compounded by the macroeconomic dislocation of 2022—characterized by high inflation and exchange rate depreciation—asset quality risks remained acute through December 2023. Although the velocity of NPL accumulation decelerated, the aggregate industry NPL ratio expanded from 16.22 percent to 20.70 percent year-on-year. At end December 2023, NPLs were estimated at 20.7% and the NPLs ratio deteriorated further to 21.8% by December,2024 but declined marginally to 18.90% in December 2025.

Asset quality risks were elevated further in December 2024, reflecting the lingering impact of the 2022 macroeconomic challenges on the banking sector. The industry's NPL ratio increased to 21.8 percent in December 2024, from 20.7 percent in December 2023 and several banks, including systemically important domestic banks and subsidiaries of reputable international banks, reported higher NPL ratios in the range of 20–40 percent. The stock taking exercise conducted by the authorities assessed an overall stock of arrears at end-2022 broadly consistent with initial program assumptions, with energy sector arrears amounting to some US$ 1.6 billion (2.3 percent of GDP) and non-energy sector arrears at about GHS 35 billion (5.8 percent of GDP) and all energy sector and non-energy sector arrears had all translated into the higher non-performing loan ratios over the past decade (IMF Country report 24/030 (01/2024). The government has continued to accumulate payables over the years. while government domestic arrears have been a recurring source of vulnerability, banks continued to rely on implicit government guarantees when lending to government service providers and arrears due to contractors. Meanwhile, high fiscal deficits over the years have compounded the NPL situation, as government arrears undermined the capacity of contractors to service their obligations to banks. The inability of government to make payments to contractors and other service providers on time and this in turn created NPLs across the banking system. The deceleration in growth also occurred mainly in the non-cocoa/gold sectors which constituted the bulk of the banks' loan portfolios. This has added to NPLs and exposed weaknesses in loan underwriting standards. Ghanaian banking sector has been saddled with non-performing loans (NPLs) over the past decade, meaning that they were not able to recover loans they have provided to their customers. These have affected the ability of banks to generate income to operate their businesses. It also led to losses which eroded their capital base further. The accumulation of new arrears could compound the NPL problem and weaken banks.

The large share of loans classified as 'loss' in systemwide NPLs points to banks' inability to effectively recover distressed loans—partly due to weaknesses in the legislative and institutional framework for insolvency and creditor rights—and suggests that further write-offs may be needed to help clean banks' balance sheet. In the year 2023, the pace of growth in private sector slowed down to 10.7% compared to 31.8% annual growth in December 2022. In real terms, credit in the private sector contracted by 10.2% relative to 4.5% contraction recorded over the comparable period. Credit to the private sector as a share of GDP is relatively low in Ghana compared to peer countries and has been declining over the past decade; and the lack of access to finance is often cited by the private sector as a key constraint to investment, particularly for small and medium-sized enterprises (IMF Country Report No. 24/30).

Another explanation was that the crowding-out effect (which raises borrowing costs for the private sector and increased the likelihood of borrower's default) has been stronger over the more recent period. Many banks were saddled with non-performing loans (NPLs), meaning that they were not able to recover loans they had provided to their customers. This affected the ability of banks to generate income to operate their businesses. It also led to losses which eroded their capital base further. The solvency of most banks has been threatened by poor asset quality, leading to significant impairment of capital. The 2017–2019 banking sector clean-up led by the Bank of Ghana restored confidence and strengthened capital positions in the short term, empirical evidence indicates that it did not deliver a sustained reduction in underlying credit risk. However, the 2017–2019 Ghana banking sector clean-up did not directly cause high non-performing loans (NPLs); rather, pervasive high NPLs and related-party lending were among the primary root causes that

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triggered the crisis, and subsequent macroeconomic pressures (such as government arrears and debt restructuring) kept NPLs elevated. Bank of Ghana's Asset Quality Reviews (AQRs) during the period revealed that severe NPLs, weak corporate governance, insider/related-party lending, and undercapitalization had deeply impaired multiple institutions (such as The Royal Bank, where 78.9% of loans were non-performing).

High fiscal deficits over the period led to high interest rates and engendered a further deterioration in bank assets, profits, and capital. The high fiscal deficits of 15.2% of GDP in 2020; 12.2% of GDP in 2021; 9.3% of GDP in 2022, 7.7% of GDP in 2023 and 5.9% of GDP in 2024 posed some challenges and prospects of creating the fiscal space in the near term are uncertain as the potential for expenditure overruns were high ahead of the 2016 2020 and 2024 elections. Historically, massive government deficits in Ghana led to delayed payments to state contractors, who in turn defaulted on their commercial bank loans. However, in 2025, Ghana achieved a marginal primary surplus of 1.9 percent of GDP and that was the first time in decades. Ghana's achievement of a 1.9% primary surplus in 2025 has directly triggered a structural recovery in the banking sector, successfully driving down Non-Performing Loans (NPLs) from 21.8% to 18.9% by the end of 2025. By generating a primary surplus, the government essentially spent less than it took in (excluding interest payments), introducing strict fiscal consolidation that removed a major driver of banking sector toxicity. Ghana's fiscal deficits and its effects on price stability and output growth have been a major source of concern to various governments in the past, Bank of Ghana, the private sector, civil society, domestic and international investors and other major international financial institutions like the IMF, the World Bank and Rating Agencies among others.

High fiscal deficits in Ghana significantly correlated with increased Non-Performing Loans (NPLs) by creating a weak economy (slow GDP, high inflation, volatile exchange rates) that stressed borrowers, leading to defaults, while government borrowing crowds out private lending, exacerbating sector issues as seen in recent years where deficits and NPL ratios rose together, impacting bank stability. Persistent fiscal deficits contributed to broader macroeconomic instability, including high inflation and volatile exchange rates. This economic environment made it difficult for businesses and individuals to repay their loans, that led to higher default rates that increased the non-performing assets in the Ghanaian banking sector. Persistent fiscal deficits have exacerbated banking sector distress by generating sovereign payment arrears, which liquidity-constrained contractors subsequently transmit into elevated non-performing loans. Chronic fiscal deficits significantly exacerbate the accumulation of non-performing loans (NPLs) within the banking sector. A primary transmission channel occurs when government expenditure arrears impair the liquidity of state contractors, thereby undermining their capacity to service commercial debt obligations. More broadly, structural fiscal imbalances induce macroeconomic instability, necessitate austerity measures that depress borrower cash flows, and drive - up benchmark interest rates through crowding-out effects. The resulting tightening of credit conditions, coupled with diminished investor confidence, severely compromises overall debt-servicing capacity. Consequently, elevated default rates impair bank profitability and contract systemic lending capacity.

This has created a vicious cycle where slower economic growth from reduced lending further fuels NPAs and fiscal strain. Ghana's large deficits fueled inflation, weaken the currency (Cedi), and slow GDP growth, making it harder for businesses and individuals to repay loans. Various governments in the past including the current government had to deal with the negative the plaque of fiscal deficits financing and its negative consequences on other macroeconomic variables particularly on inflation in the Ghanaian economy (Osei, and Olawale Oguloka, (2022). In essence, fiscal irresponsibility undercuts economic fundamentals, made loan repayment difficult and directly increased the burden of bad loans on Ghana's banking system. The period between 2016-2025, high NPAs (rising from 14.7% to over 21%) coincided with periods of large fiscal deficits, inflation, and slow growth, showing a strong link. According to Demirguc-Kunt and Detriagache (1998) the Ghanaian banking sector has been classified as fully-fledged banking crisis and of a systemic nature because of average NPL ratios of 18.07% as against the acceptable NPLs ratio of 10%. The high NPL ratios had been due to high fiscal deficits, macro-economic instabilities of high inflation, persistent depreciation of the local currency, higher policy and interest rates were found to have affected banks' asset quality. As fiscal deficits widened, inflation accelerated, interest rates rose to above 30%, investors became skittish and began to exit the debt market, and the exchange rate began to depreciate, thereby creating conditions for asset price deterioration. In this regard, exchange rate depreciation had a negative impact on asset quality, particularly in foreign owned banks with a large amount of lending in foreign currency to un-hedged borrowers, and interest rate hikes affect the ability to service the debt. Economic downturn in 2022/2023 with its higher inflation, local currency depreciation has all exerted significant pressures on borrowers, thus making them increasingly challenging for them to pay off their loan obligations. The rate of inflation remained high and volatile during much of the period (US$1-GHC3.025) 2014- US$1-GHC 12.15) 2023. The rate of depreciation of the local currency, the cedi, depreciation in the 2016-2023 period and the budget deficit situation has persisted all impacted on non-performing loans. These unstable macro-economic conditions impacted negatively on the non-performing loans, mobilization of deposits and the financial depth of the economy. The result showed that stability risks had heightened considerably, with high nonperforming loans (NPLs) and undercapitalized banks.

Macroeconomic instabilities impacted negatively on Ghanaian banks' capital over the period under review. The new capital requirement was necessary to align banks' capital base more closely with macroeconomic realities. High inflation and rapid currency depreciation over the years (cumulative depreciation of the cedi by 51.8 per cent between

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end-December 2013 and end-April 2018) meant that in dollar terms, the 2007 and 2013 minimum capital requirements of GH¢60 million (US$ 61.8 million at end-December 2007) and GH¢120 million (US$56.4 million at the time) had depreciated in value to $13.6 million and $27.2 million respectively, as at end-April 2018. The financial sector cleanup in 2017-2019 did not yield the intended effects, primarily because of the lack of sustained improvements in the macroeconomic environment. The need to improve macroeconomic stabilization measures, especially fiscal stabilization, is quite clear. However, weaknesses in the fundamental structure of the economy impacted negatively on the banking sector.

The crowding-out effect of government economic dominance, under conditions of fragile fiscal discipline, has fundamentally heightened systemic risk and vulnerability across the banking industry. The state's pervasive role in economic activity, compounded by structural deficiencies in fiscal management, has exacerbated vulnerabilities within the banking sector. State-owned enterprises (SOEs) and numerous small- and medium-sized enterprises (SMEs) exhibit a high degree of dependence on public procurement. Consequently, the accumulation of public sector payment arrears to contractors and service providers had severely constrained their debt-servicing capacity, thereby escalating non-performing loans (NPLs) across the banking sector.

The macroeconomic downturn of 2022 catalyzed an escalation in non-performing loans (NPLs), catalyzed by labor market contractions and severe debt-servicing constraints among small and medium-sized enterprises (SMEs) and individual obligors. Furthermore, supervisory laxity in enforcing prudential standards enabled the accumulation of concentrated credit exposures, whereas methodological shortcomings in micro- and macroprudential risk analysis precipitated a systemic underestimation of financial stability risks. Persistent surges in non-performing loan (NPL) ratios have severely impeded the banking sector's capacity for credit creation, thereby stifling broader macroeconomic growth in Ghana. This contractionary effect is manifested at both the aggregate system level and the individual bank tier, wherein institutions carrying elevated NPL burdens systematically restrict new credit allocations to the private sector. Cross-country empirical evidence indicates that Ghana exhibits some of the highest and most volatile non-performing loan (NPL) ratios in Sub-Saharan Africa.

Furthermore, cross-sectional banking data reveals an inverse relationship between asset quality and core performance metrics: institutions with elevated NPL burdens systematically register lower profitability, diminished capital adequacy, higher funding costs, and increased provisioning requirements. A high volume of impaired assets depresses interest income, mandates heavier loan-loss provisioning, and elevates liability funding costs, thereby eroding bank profitability and eroding capital buffers. Weakly performing banks face acute managerial incentives to undertake high-risk lending in pursuit of elevated yields to restore margins—a behavioral response that frequently exacerbates credit risk and fuels further NPL accumulation.

Demirgüç-Kunt and Detragiache (1998) define a systemic banking crisis as an episode of financial distress meeting at least one of the following threshold criteria:

- Asset Quality Deterioration: The ratio of non-performing assets to total banking system assets exceeds 10%—thereby confirming a full-fledged, systemic banking distress event
- Fiscal Burden: Government rescue and resolution operations incur a fiscal cost equivalent to at least 2% of Gross Domestic Product (GDP).
- Structural Intervention: Systemic distress compels large-scale state nationalization of commercial banks.
- Market Panics and Emergency Policy: Severe bank runs occur, or authorities deploy extraordinary stabilization measures—such as administrative deposit freezes, extended bank holidays, or blanket government deposit guarantees

Drawing on the cross-country empirical framework established by Demirgüç-Kunt and Detragiache (1998), the Ghanaian banking sector's mean indicator of 18.07% during the review period aligns with their systemic crisis threshold—characterized by high real interest rates and macro-financial instability—thereby confirming a full-fledged, systemic banking distress event. Empirical evidence from this study reveals that non-performing loans (NPLs) in Ghana's banking sector are shaped by five primary clusters of determinants: protracted government legacy, debt macroeconomic instability (manifested through high inflation, elevated interest rates, real GDP growth dynamics, and currency depreciation); bank-specific vulnerabilities (including substandard underwriting, weak credit risk management, deficient internal controls, connected lending, and insider fraud); industry-level constraints (such as protracted judicial proceedings for loan defaults and regulatory pressures); and persistent fiscal deficits.

Following an estimated non-performing loan (NPL) ratio of 20.7% at the close of December 2023, asset quality across Ghana's banking sector deteriorated further to 24.1% by June 2024, according to the Bank of Ghana Monetary Policy Committee (MPC) report. This upward trajectory was compounded by selecting systemically important domestic banks (DSIBs) and state-owned banks reporting acute NPL concentrations within the average 20% to 40% range, thereby presenting a significant downward risk to broader macroeconomic stabilization and recovery efforts. From the literature review the causes of the rising non- performing loans in the banking sector have been due to economic downturn, banking related issues, borrowers' related issues and legal, regulatory, judicial problems and high fiscal deficits prevailed over the years in the banking sector. The country has experienced economic downturn in terms of higher interest rates, higher inflation, persistent depreciation of local currency, and the inability of the government to pay contractors and service providers on time have exerted significant negative impact on businesses and other borrowers to repay their loan obligations. Existing literature underscores that the upward trajectory of non-performing loans (NPLs) within the banking sector is driven by a

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confluence of macroeconomic instability, institution-specific credit risks, borrower-level distress, and legal-regulatory constraints, further exacerbated by chronic fiscal deficits. Severe macroeconomic headwinds—manifesting as elevated interest rates, high inflationary pressures, continuous depreciation of the local currency, and government delays in settling obligations to contractors and service providers—have systematically eroded the debt-servicing capacity of commercial and retail borrowers

A comprehensive grasp of these economic forces could be pivotal in managing and reducing the country's higher non-performing loans ratio. The other factors behind the high non-performing loans in the banking sector were inappropriate credit risk management, irresponsible borrowing, poor supervision, and weak governance. Banks and other lenders' related issues have contributed not in small ways in the higher non-performing asset ratio in the banking sector. Financial institutions including banks were not immune to the NPLs related issues which included the presence of poor credit underwriting, weak credit reference procedures, inadequate and poor credit risk management including monitoring and recoveries procedures and processes have all resulted in the up-ticked in the recent NPLs data. Bank lending and moral hazard. Banks with higher average interest rates on loans (measured as the ratio of interest income to gross loans) have higher NPL ratios, probably because of customers' difficulty in repaying more expensive loans and adverse selection effects. In addition, highly leveraged banks, as captured by the loan-to-deposit ratio, have higher NPL ratios, perhaps because they tend to take more risks. Poor borrower assessments including fraud and weaknesses in loan underwriting standards have all affected the up ticked of non -performing loan in the banking sector over the period under review. Lack of integrity and honesty on the part of borrowers have all played pivotal role in the emergence of non-performing loans in the banking sector. Issues such as bankruptcy and insolvency defaults in payment and fraudulent activities have contributed to the higher non-performing loans in the banking sector. Borrowers felt rather powerless in dealing with banks and non-bank financial institutions, high interest rates, hidden charges, non-disclosure of persistent information, and unfair denial of access to credit at reasonable interest rates. Aggressive lending and high exposures to risky sectors like government of Ghana (GoG) road contracts for example,

In Ghana, weak debt enforcement and limited creditor rights significantly hinder the ability of banks to resolve Non-Performing Loans (NPLs), contributing to a high industry Non-Performing Loan (NPL) ratio that stood at approximately 18.90% as of December 2025. Protracted legal disputes and persistent adjournments by the courts in credit-related cases delay the recovery of bad loans. Inadequate bankruptcy laws and insolvency procedures often embolden "strategic default" by borrowers and weaken the confidence of creditors. While the Borrowers and Lenders Act, 2020 (Act 1052) improved information disclosure, it does not grant lenders the right to dispose of collateral without a court order, leading to cumbersome execution through the court system. Excessive injunctions and perceived judicial bias further weaken banks' ability to enforce contracts effectively. While factors such as macroeconomic volatility, weak credit appraisal systems, and poor borrower behaviour have received substantial attention, a less focused but equally consequential factor is the judicial inefficiency in loan recovery.

The speed, fairness, and predictability of judicial processes directly affect the banking sector's ability to recover delinquent loans, enforce collateral, and maintain financial discipline among borrowers. According to Dankwa (2025) the judicial inefficiencies affecting Ghana's loan recovery system can be grouped into three main categories: Procedural delays and case backlogs – Many loan-related cases are trapped within a congested court system. Banks seeking judgment for defaulting borrowers face long adjournments, repeated injunctions, and procedural technicalities. The commercial courts, though established to expedite financial disputes, are themselves overwhelmed by case volumes. Weak enforcement of collateral – Even when banks obtain favourable judgments, enforcing those rulings is another challenge. The process of auctioning collateral is often hampered by administrative bureaucracy, corruption, or interference. Borrowers sometimes use legal loopholes to obtain injunctions that halt asset disposal indefinitely. Perceived bias and lack of specialized knowledge – Some judges handling financial disputes may lack specialized knowledge of banking and finance, leading to inconsistent interpretations of loan contracts, interest compounding, or collateral agreements. In addition, there is a growing perception among financial institutions that courts tend to show sympathy toward defaulting borrowers, especially in cases with political or social influence, undermining the principle of commercial fairness. It is not uncommon for loan recovery cases to take between 3 to 7 years before final judgment.

Weaknesses in the legal, regulatory and judicial systems have all contributed to the uptick in non-performing loans in the banking sector over past decade. Protracted legal disputes, persistent adjournment in credit related by courts and weaknesses in the Borrowers and Lenders Act 2020 (Act 1052). Protracted legal disputes on credit issues, difficulty in enforcing and executing collaterals through the court systems and compliance complexities have negatively impacted on the non-performing loans in the banking sector. However, the Borrowers and Lenders Act 2020 Act 1052 has provided the legal framework for credit, improved the standard of disclosure of information for both lenders and borrowers but not included the legal rights for the lenders to dispose collateral used to support bank facilities without resorting to the courts. The establishment of the Collateral Registry at the Bank of Ghana, as mandated under the Borrowers and Lenders Act 2020 (Act 1052) was indeed a welcomed innovation to credit delivery in Ghana.

However, the Collateral Registry has improved registration of immovable and movable assets, improved searches on assets and registration of securities but had not facilitated the speedy realization of collateral without the approval of courts especially in legal mortgages. All the

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above issues including economic downturn, unaddressed bank and non-bank financial institutions related issues, weaknesses in legal, regulatory, judicial issues and poor borrowers-related issues have contributed to the rise in the non-performing loans in the banking sector. Lastly, higher global risks like geopolitics in the Middle East concerning the rises in petroleum products and Covid 19 pandemic have all contributed to increases in NPLs in the banking sector over the past decade. In Sub-Saharan Africa, countries like Ghana, Chad, Nigeria, and the Republic of Congo have seen high Non-Performing Loan (NPL) ratios, often driven by economic shocks (commodity prices, COVID-19), governance issues, and macroeconomic volatility with higher fiscal deficits, with Ghana exceeding 18.07% while Chad even reached over 27% in recent years.

Ghana's gross public debt at the end of 2022 reached approximately GH¢435.3 billion (or about US$28.96 billion in external debt components), representing roughly 88.1% of GDP At the close of December 2022, the industry's reported non-performing loans (NPL) ratio stood relatively flat at 16.2% to (compared to 15.2% at the end of 2021). This superficial stability occurred largely because high credit growth and cedi-denominated loan revaluations outpaced the immediate nominal increase in defaulted private loans. The increase in public debt was found to have led to higher NPLs. This could be because higher public debt increases the sovereign risk premium, affecting banks' funding costs and lending rates. High debt also increased the probability of government arrears accumulation, which was translated into higher NPLs in 2024.

Empirical evidence indicates that the escalation of Ghana's public debt between 2018 and 2023 exerted an upward pressure on non-performing loans (NPLs). This transmission occurred primarily through two channels: elevated sovereign risk premiums, which inflated commercial banks' funding costs and subsequent lending rates, and a heightened incidence of sovereign payment arrears, which directly impaired obligors' debt-servicing capacity. Between 2018 and 2023, public debt expansion fueled NPL growth via two main transmission mechanisms: (i) an increase in the sovereign risk premium that raised interbank and deposit funding costs, and (ii) sovereign liquidity constraints that manifested as government expenditure arrears, eroding the cash flows of contractors and suppliers who service commercial bank loans

The 2022/2023 Domestic Debt Exchange Programme (DDEP) exacerbated pre-existing asset quality pressures, driving up non-performing loan (NPL) ratios across Ghana's banking sector and severely constraining both profitability and credit intermediation**.** Rather than traditional private-sector loan defaults alone, the 2022 sovereign debt crisis and the subsequent launch of the Domestic Debt Exchange Programme (DDEP) in 2022/2023 caused massive balance-sheet impairments. Universal banks wrote off or impaired billions of cedis in government bond holdings (with total industry impairment charges surging). The banking sector's average NPL ratio climbed from 15.0%–15.9% in late 2021/2022 to 18.4% to 20.0% through 2023 as capitalization eroded and borrower distress spread. Banks absorbed massive net impairment losses (reaching approximately GH¢19.5 billion in 2022) due to sovereign bond haircuts and present-value losses on Government of Ghana (GoG) holdings. Sovereign losses reduced banks' lending capacity and credit-to-GDP ratios, restricting private-sector liquidity and making it harder for businesses and individuals to service existing commercial and retail loans. Bond-backed and collateralized facilities lost real value, while soaring inflation (peaking at 54.1% in December 2022) and high interest rates worsened debt-service friction across the economy

Ghana's 2022/2023 Domestic Debt Exchange Programme (DDEP) created a severe crowding-out effect on the private sector by forcing banks to shift capital into high-yield government Treasury bills rather than lending to businesses. The key factors of the crowding-out effect were surging interest rates: contracted private credit and risk-free preference. To mop up liquidity and finance its budget, the government drove Treasury bill rates up sharply moving from roughly 22% per annum in 2022 to a peak of 33.7% in 2023. Facing higher risks and heavy losses from the DDEP (which hit domestic banks' net present values and raised non-performing assets to 20%), commercial banks scaled back credit to private enterprises. Banks found investing in high-yielding government T-bills safer and more lucrative than extending commercial loans to the private sector, starving businesses of expansion capital. DDEP directly weakened the banks' balance sheets and reduced their capacity to lend, dampening overall economic activity and further contributing to the rise in the NPL ratio from 16.22% in 2022 to 20.7% in 2023.

In the post DDEP 2023, the banking system was liquid, less profitable and under- capitalized, non-performing loans (NPLs) were very high, and a significant segment of the banking industry was fragile. The solvency of most banks was threatened by poor asset quality, which had led to significant impairment of capital. A decline in credit growth combined with poor asset quality (high non-performing loans) is a major concern because it signals financial fragility and threatens broader economic stability. When loans are not repaid (high non-performing loans or NPLs), banks lose expected interest income and principal. This reduces their profitability and eats into their capital reserves. The industry NPL ratio climbed significantly as high inflation, elevated interest rates (peaking above 30%), and the macroeconomic fallout of the sovereign debt restructuring strained borrower repayment capacity. The NPL ratio rose from 18.7% in June 2023 to 24.1% by June 2024, hit a high of 25.7% by April 2024, and reached 24.3% by August 2024 before declining to 21.8% as at end of December 2024 but improved marginally to 18.90% as at end of December 2026. The decline in Ghana's banking industry non-performing loan (NPL) ratio from 21.8% in December 2024 to 18.90% in December 2025 was driven by slowdown in new NPL accumulation, enhanced loan recoveries, resolution of legacy loans, bad debt write-offs, stricter underwriting standards and macroeconomic stabilization.

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Table 1 Ghana's Banking Sector Non- Performing Loan Ratios for the Period 2016-2025

Year end	%
2016	17.30
2017	22.70
2018	18.20
2019	14.70
2020	15.70
2021	15.20
2022	16.22
2023	20.70
2024	21.80
2025	18.90
Average	(18.14)

Source: Researchers' Compilation: (IMF Country Reports/ Bank of Ghana's Banking Sector Development Reports from 2016-2025

IV. DISCUSSION OF FINDINGS

The overall findings point to a worrisome situation for the banking sector as a whole. An analysis of the growth rate in the NPA level shows that the problem is evident with the private domestic- owned banks and the state- owned banks but not with foreign owned banks in the banking space over the period under review. The findings show that non-performing loans remain a central and persistent challenge in Ghana's banking sector, with significant implications for financial stability, bank performance, and economic growth.

The study finding revealed that at end December 2025, NPLs were estimated at 18.90 percent and several banks, including systemically important domestic banks and state-owned banks reported higher NPL ratios in the range of 30–50 percent. The study finding is consistent with IMF/2011/11/131) which states as at end December 2010, NPLs were estimated at 17.6 percent and several banks, including systemically important domestic banks and subsidiaries of reputable international banks, reported higher NPL ratios in the range of 20–40 percent. Over the last few decades, NPLs have remained persistently high across the industry, and pockets of vulnerability remain. Elevated non-performing loans (NPLs) have constituted a persistent systemic challenge within the Ghanaian banking sector, maintaining an average trajectory above 18.14% since mid-2015**.**

A critical assessment indicates that escalating asset quality pressures are primarily a function of public sector legacy debts compounded by deficient credit risk management frameworks within vulnerable domestic institutions. At the firm level, a high concentration of NPLs compresses net interest margins, escalates provisioning expenses under stringent regulatory guidelines and financial reporting standards (e.g., IFRS 9), and consequently diminishes core capital adequacy buffers. In 2017, the non-performing loan (NPL) ratio reached an all-time high of nearly 22.7%. This surge was driven by economic instability and the government's delayed payments to contractors, highlighting how state fiscal problems that directly triggered near banking crises.

Empirical findings indicate that sovereign debt accumulation exacerbates non-performing loan (NPL) ratios by elevating sovereign risk premiums, which in turn drive up bank funding costs and lending rates. Furthermore, elevated public indebtedness heightens the likelihood of sovereign payment arrears, translating directly into asset quality deterioration. Sustained high NPLs compress banking sector liquidity and impede macroeconomic growth by encumbering regulatory capital that would otherwise be channeled into productive credit extension. Consequently, obligor defaults compel financial institutions to allocate substantial regulatory provisions to mitigate anticipated credit losses. Furthermore, the study findings show that Domestic Debt Exchange Programme (DDEP) exacerbated existing non-performing loan (NPL) vulnerabilities, compressing bank profitability and severely constraining credit intermediation across the financial sector. Compounding pre-existing credit risks, the DDEP aggravated the industry's NPL burden, adversely affecting net interest margins and dampening banks' capacity to extend new credit. Empirical literature demonstrates that non-performing loans (NPLs) exert an adverse effect on credit volumes and loan pricing. To mitigate credit losses, financial institutions typically restrict credit supply and elevate lending rates, while highly leveraged borrowers simultaneously defer new credit applications. This interplay can catalyze a systemic feedback loop: an adverse macroeconomic shock compromises asset quality and erodes bank profitability, thereby constraining capital deployment capacity and impeding macroeconomic recovery. In the Ghanaian context, despite regulatory interventions by the Bank of Ghana (BoG) in August 2025 to tighten underwriting standards, asset quality remains constrained. Although commercial banks executed bad debt write-offs totaling GH₵1.64 billion during 2025, the aggregate NPL ratio exhibited nominal compression, stabilizing at 18.90% by December 2025. This persistent credit distress is heavily concentrated in private sector exposures—predominantly within the construction and agricultural sectors—underscoring the structural difficulties inherent in resolving legacy loan portfolios. As documented in the IMF Country Report No. 24/030, prolonged fiscal slippages led to a substantial accumulation of government arrears, exerting upward pressure on non-performing loans (NPLs) across Ghana's banking industry. A joint stock-taking assessment by

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the International Monetary Fund and the Bank of Ghana revealed that total arrears remained aligned with initial program projections: energy sector arrears stood at approximately USD 1.6 billion (2.3% of GDP), while non-energy sector arrears reached roughly GHS 35 billion (5.8% of GDP). Over the past decade, these legacy obligations have systematically degraded commercial bank asset quality and driven up system-wide NPL ratios

The study findings revealed that the structurally high level of NPLs in Ghana could be explained by a range of factors, including government arrears creating debt repayment difficulties for domestic suppliers, macroeconomic volatility, poor credit risk management practices, and a legacy of problem loans that remain unresolved or are not written off partly because of weak legal systems. In Sub-Saharan Africa, countries like Ghana, Chad, Burundi, and the Republic of Congo have seen high Non-Performing Loan (NPL) ratios, often driven by economic shocks (commodity prices, governance issues, high fiscal deficits and macroeconomic volatility, with Ghana exceeding average of 18.14% and Chad even reached over 27% in recent years.

The empirical findings indicate that the persistent accumulation of unliquidated government payables—lacking definitive repayment schedules—has exacerbated fiscal deficits and propagated non-performing loans (NPLs). As sovereign arrears erode the liquidity of domestic contractors, their capacity to service bank obligations diminishes. Consequently, elevated NPL ratios constrain aggregate credit supply, a contraction observed across both the broader banking system and individual financial institutions carrying disproportionately high-risk exposures.

The study findings corroborate the assertion that a decade-long accumulation of sovereign arrears in energy and non-energy sectors, alongside macroeconomic fluctuations, bank-level characteristics, and structural industry parameters, acts as the primary catalyst for elevated non-performing loans (NPLs) in the Ghanaian banking industry. This dynamic has heightened systemic stability risks, manifesting as acute capital erosion and high NPL ratios. The sector remains further encumbered by structural bottlenecks, specifically the scarcity of long-term capital, constrained financial access, and elevated intermediation costs—largely cultivated by heavy state involvement and systemic weaknesses in risk governance, supervisory oversight, and insolvency resolution mechanisms. Despite subdued gross domestic product growth, Ghana's fiscal position has weakened considerably, exacerbated by the continuous accumulation of domestic government arrears that drive elevated non-performing loans across the banking sector. This fiscal strain is compounded by the persistent depreciation of the local currency against major trading benchmarks. Although the Bank of Ghana has implemented marginal policy rate reductions amid a deceleration of inflation into double-digit territory, retail lending rates remain rigid. This sluggish transmission mechanism is primarily attributable to deep-seated structural constraints, including heightened inflation expectations driven by fragile fiscal fundamentals, balance sheet rigidities, elevated operational costs, stringent cash reserve requirements, and substantial non-performing loan provisions.

Consequently, the financial system remains highly vulnerable to potential macroeconomic shocks—such as fiscal imbalances, volatility in primary commodity prices for cocoa, gold, and oil, or fluctuations in inward remittances—which could simultaneously destabilize interest rates, exchange rates, and asset quality. The decade-long persistence of asset quality pressures highlights the necessity of examining the intersection between macroeconomic conditions and banking system health. Empirical studies frequently incorporate institution-specific variables alongside macro-level indicators, as these internal metrics often signal or precipitate risky lending behavior. In Ghana's banking sector, elevated non-performing loan (NPL) ratios—averaging 18.14%—have been heavily exacerbated by firm-level deficiencies, including weak credit risk management, compromised internal controls, connected lending, and insider dealings. This average stands out unfavorably against regional comparators such as Nigeria (4.01%) and Côte d'Ivoire (8.80%)

The study finding reveals that the government's dominance in economic activity, against the backdrop of weaknesses in fiscal management, had further increased vulnerabilities in the banking sector. State-owned enterprises (SOEs) and many small-and medium enterprises (SMEs) relied heavily on business from the government. Consequently, the government's accumulation of payment arrears to contractors and other service providers undermined their capacity to service their bank loans and created NPLs across the industry. The study finding is consistent with (IMF Country report 2011/11/131) which states that the government's dominance in economic activity, against the backdrop of weaknesses in fiscal management, further increases vulnerabilities in the banking sector. State-owned enterprises (SOEs) and many small-and medium enterprises (SMEs) rely heavily on business from the government. Consequently, the government's accumulation of payment arrears to contractors and other service providers has undermined their capacity to service their bank loans and created NPLs across the industry.

The study finding reveal that the deteriorated macroeconomic environment with high interest rate and inflation had been associated with poor asset quality in Ghana over the past decade. The study finding is consistent with Asli Demirgüç-Kunt and Enrica Detragiache (1998) demonstrated that systemic banking crises are closely linked to weak macroeconomic conditions, high real interest rates, and institutional vulnerabilities.

The study findings further reveal that Ghana's high fiscal deficits had fuelled non-performing assets (NPAs) by creating weak macroeconomics (slow growth, high inflation, high rates), hurting borrowers' ability to repay, increasing government debt stress (like the 2022/2023 Domestic Debt Exchange Program impact on bank assets), and straining banks' liquidity and profitability, leading to capital erosion

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and potential banking crises. The government's need to borrow raises interest rates, while fiscal instability deters investment, leaving banks with fewer good loans and more bad debts, significantly impacting their stability, as seen with the huge impairments post-DDEP. Large deficits often mean slow GDP growth, high inflation, and elevated real interest rates, making it harder for businesses and individuals (the banks' borrowers) to service loans, thus increasing defaults. To finance deficits, the government has been borrowing heavily, often through Treasury Bills, crowding out private lending and pushing up interest rates, further straining borrower finances. Direct increase in bad loans, as seen with Ghana's NPL ratio rising significantly during periods of high deficits.

The study findings highlighted that sustained fiscal imbalances in Ghana have increasingly transmitted systemic vulnerabilities to the domestic financial architecture, generating acute pressures on bank asset quality. The primary transmission channels operate through sovereign-bank linkages, notably government payment arrears to construction and energy sector entities, as well as the balance-sheet shocks induced by public debt restructuring. Furthermore, chronic fiscal deficits have fueled wider macroeconomic volatility—characterized by high inflationary pressures and severe currency depreciation—which systematically erodes the real debt-servicing capacity of both corporate and retail borrowers. Consequently, delays in government disbursements to Independent Power Producers (IPPs) and infrastructure contractors impair their liquidity, rendering them unable to service commercial bank debt and converting performing credit exposures into non-performing assets. The study has shown that high fiscal deficits over the past decade had led to high interest rates and engendered a further deterioration in bank assets, profits, and capital.

The high fiscal deficit of GDP of 15.2% in 2020; 12.2% in 2021; 9.9% in 2022, 7.7% in 2023 and 5.9% in 2024 (Ministry of Finance, 2024) posed some challenges and prospects of creating the fiscal space in the near term were uncertain as the potential for expenditure overruns were high ahead of the 2016 2020 and 2024 elections. Inability to reduce or contain fiscal deficits have compounded the legacy debt to non-energy and energy sectors that had negatively impacted on the non-performing loan ratios. Ghana's fiscal deficits and its effects on price stability and output growth have been a major source of concern to various governments in the past, Bank of Ghana, the private sector, civil society, domestic and international investors and other major international financial institutions like the IMF, the World Bank and Rating Agencies among others. Fiscal deficits picked up from 6.3 percent of GDP in 2015 to 7.8 per cent of GDP in 2016. Though it declined to 5.9 percent of GDP in 2017 against a program target of 6.3 percent of GDP, it significantly ballooned again to 7.2 percent of GDP in 2018 against a revised program target of 4.4 percent of GDP in consultation with the International Monetary Fund. Various governments in the past including the current government had to deal with the negative the plaque of fiscal deficits financing and its negative consequences on other macroeconomic variables particularly on inflation in the Ghanaian economy (Osei, and Olawale Oguloka, (2022).

The study finding shows that persistent fiscal deficits have accumulated into elevated public debt stocks, compounding the sovereign risk premium. Consequently, financial institutions face higher wholesale funding costs, which translate into restrictive commercial lending rates. This tightening of credit conditions impairs the debt-servicing capacity of private-sector borrowers, resulting in an escalation of non-performing loans (NPLs). Furthermore, sovereign debt restructuring initiatives—such as the 2022–2023 Domestic Debt Exchange Programme (DDEP)—have compelled banks to absorb substantial impairment losses on sovereign holdings, eroding capital buffers, constraining credit supply, and dampening aggregate economic activity

The study finding reveals that lax enforcement of prudential regulations facilitated a significant accumulation of credit concentrations across banking institutions; concurrently, methodological deficiencies in assessing idiosyncratic and systemic risks resulted in a profound underestimation of the attendant threat to overall financial stability. This study finding is consistent with IMF Country report, 2011/11/131) which states that weaknesses in enforcing prudential regulations allowed banks to build up substantial loan concentrations while deficiencies in the analysis of individual bank risk and systemic risks have led to an under-appreciation of the stability risk implications.

Synthesizing empirical literature and data analyses reveals that non-performing loans (NPLs) in Ghana's banking sector are driven by an interplay of macroeconomic, bank-specific, and structural industry determinants. Given that elevated NPLs pose a systemic threat and serve as a primary catalyst for historical banking crises, this study investigates these underlying drivers to deepen the analytical framework surrounding credit risk in the domestic financial market. The study highlighted key structural and institutional vulnerabilities included legal and collateral bottlenecks, asset concentration and risk management, and sovereign arrears and spillover effects. Creditor rights enforcement remains impeded by protracted, legally complex, and unpredictable collateral liquidation procedures. Despite the operationalization of commercial courts and the Collateral Registry, financial institutions continue to encounter significant judicial delays during asset foreclosure. The study finding is consistent with IMF Country report 2011/11/131) which states that the deficiencies are exacerbated by the weak environment for enforcing creditor rights. Despite the establishment of commercial courts and the Bank of Ghana's collateral registry under the *Borrowers and Lenders Act, 2020* Act 1052), banks reported experiencing prolonged delays in foreclosing on collateral.

The study findings reveal that the commercial banks face heightened credit exposure due to a heavy reliance on loan books as primary asset classes, often compounded by suboptimal internal risk governance and weak enforcement mechanisms. The study findings corroborate with IMF Country Report (2011/11/131) which states that the

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weaknesses in commercial banks' risk management and in supervision have also been important factors contributed to rising NPLs in the banking sector. Commercial banks' internal controls are generally lax and credit risk management practices have not kept pace with the growth of the industry and the changing risks.

The study highlighted fiscal accumulation of government payment arrears owed to civil contractors and service providers had systematically constrained obligors' debt-servicing capacity, propagating NPLs across the broader banking network. Empirical evidence from the research indicated that sovereign-linked obligations accounted for **21.8%** of total NPLs reported at the close of December 2024, with a marginal projected amelioration to **18.90%** by December 2025 which was relatively higher than the global acceptable practices of 10% (Demirgüç-Kunt and Detragiache **(**1998).

Over the past ten years, Ghana's banking landscape has experienced an upward trajectory in asset quality deterioration. This trend has been driven by a confluence of structural and macroeconomic pressures, including: the lingering structural reverberations of the 2017–2019 financial sector clean-up, sovereign stress induced by the 2022 Domestic Debt Exchange Programme (DDEP), severe macroeconomic volatility, characterized by high inflation, steep policy and lending rates, persistent depreciation of the Ghanaian Cedi, and deteriorating terms of trade and fiscal bottlenecks stemming from delayed payments to contractors and suppliers by Ministries, Municipals, Departments, and Agencies (MMDAs). Empirical findings underscore deficient managerial oversight as a primary catalyst for the proliferation of non-performing loans (NPLs). Specifically, institutions burdened with impaired assets frequently exhibit systemic failures in loan underwriting, continuous monitoring, and risk control mechanisms. This internal vulnerability is further exacerbated by external macroeconomic pressures, particularly sovereign fiscal deficits; protracted government payment arrears directly impair the liquidity of state contractors, thereby compromising their capacity to service institutional debt. More broadly, the literature attributes NPL accumulation to a complex interplay of systemic and idiosyncratic factors, including macroeconomic volatility, terms-of-trade deterioration, prohibitive interest rates, over-reliance on high-cost interbank wholesale funding, insider lending, and prevalent moral hazard.

From a macroprudential perspective, elevated levels of non-performing loans (NPLs) generate systemic negative externalities, positioning domestic financial institutions at a perceived disadvantage relative to counterparts in jurisdictions with cleaner asset profiles. Chronically high NPL stocks contract aggregate credit supply, impede the monetary policy transmission mechanism, and ultimately suppress macroeconomic output growth. This structural drag was exacerbated by the macroeconomic instability of 2022, characterized by real interest rate volatility, widening interest rate spreads, and a defensive liquidity pivot by commercial banks toward zero-risk, reserve-eligible government and central bank securities. Consequently, universal banks experienced heightened credit risk exposure, a vulnerability compounded by credit portfolios concentrated in traditional lending and underpinned by deficient risk-mitigation frameworks and weak enforcement of creditor rights. Heightened macroeconomic instability has severely constrained credit intermediation, particularly long-term lending—by amplifying corporate planning uncertainty and eroding established standards of capital adequacy and prudential risk management. While the pre-pandemic period was characterized by resilient gross domestic product (GDP) growth, exchange rate stability, and a favorable balance-of-payments position, the post-2020 electoral cycle witnessed a rapid macroeconomic contraction driven by an expansionary fiscal stance compounded by global food and energy shocks. Widening fiscal deficits fueled inflationary pressures, pushed benchmark interest rates toward 30 percent, dampened investor sentiment, and triggered acute currency depreciation, thereby engendering systemic asset-price erosion. By early 2022, the convergence of unsustainable public debt trajectories, the lingering scars of the COVID-19 pandemic, the geopolitical fallout of the Russia-Ukraine war, and tightening global monetary conditions precipitated a collapse in sovereign creditworthiness and a loss of international capital market access. These external shocks, interacting with domestic vulnerabilities, severely degraded commercial bank asset quality. In the wake of the crisis, Ghana experienced a marked deceleration in real GDP growth, a contraction in portfolio capital inflows and private remittances, and an acceleration of exchange-rate depreciation.

V. CONCLUSION

Over the preceding decade, commercial banks in Ghana have encountered a marked erosion in asset quality, precipitating substantial financial losses and a depletion of capital reserves. The escalation of non-performing loans (NPLs) has not only elevated systemic vulnerability to external shocks but has also constrained credit intermediation, generating contractionary repercussions across the real economy. The study findings indicate that asset quality deterioration across the 2016–2025 period was rooted in persistent systemic vulnerabilities, notably macroeconomic instability and acute fiscal distress. Persistent inflationary pressures, rapid depreciation of the Ghanaian cedi, and restrictive monetary policy severely eroded the debt-servicing capacity of borrowers. Furthermore, structural fiscal imbalances—characterized by substantial sovereign arrears, including US$2.1 billion owed to energy sector independent power producers (IPPs) and GHS 35 billion in non-energy contractor obligations—starved the private sector of liquidity and precipitated widespread credit defaults.

Ghanaian banks' asset quality has been weak for the past decade but deteriorated significantly following the sovereign debt restructuring that was launched in December 2022. The execution of the 2022–2023 Domestic Debt Exchange Program (DDEP) triggered severe sovereign debt restructuring losses, resulting in deep balance-sheet impairments and capital erosion within the banking sector.

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The study findings further reveal that persistent fiscal overruns between 2020 (15.2% of GDP) and 2024 (5.9% of GDP) escalated domestic public debt issuance, subsequently crowding out private credit through elevated lending rates. The broader macroeconomic fallout—notably high inflation, steep Cedi depreciation, and aggressive monetary tightening—compromised corporate and retail solvency. Consequently, bank asset quality weakened significantly, propelling non-performing loan (NPL) ratios from a structural baseline of 11%–17% to a cyclical peak of 21.8%–22.7% by 2024.

Empirical findings further indicate that sovereign payment arrears owed to contractors and service providers constrained obligors' debt-servicing capacity, driving an industry-wide escalation in non-performing loans (NPLs). Concurrently, a pronounced deterioration in asset quality eroded domestic banking capital buffers and induced substantial financial losses. This rapid accumulation of non-performing assets (NPAs) heightened systemic vulnerability to exogenous shocks and curtailed credit creation, thereby generating adverse macro-financial spillovers. Findings suggest that non-performing loans are significantly affected by bank-specific, industry, and macroeconomic variables. Based on the findings of the study, it means whereas banks in Ghana should pay attention to bank-specific factors when providing loans to restrain the level of NPLs, large banks should pay attention to both bank-specific and macroeconomics factors when providing loans in order to restrain the level of NPLs. From the non-performing loans data complied clearly shown that if the government do not repay all legacy debts to non-energy and energy sectors and adopt pragmatic measures to address the macro-economic instabilities of high inflation, persistent depreciation of local currency against major trading currencies, higher interest rates and high fiscal deficits, the high non-performing loan ratios would not be addressed. As NPL concerns were a major caused for a fully-fledged banking crisis as according to (Demirguc-Kunt and Detragiache (1998).

The study findings reveal that government arrears and other fiscal issues led to NPL surges in the country, at times through suppliers to government entities no longer able to service their bank debt. Mismanagement at some banks such as weak risk management and, more generally, poor governances were cited as the cause of high NPLs among other issues in multiple episodes (for instance, the cases of Ghana-2016-2025). The findings further show that the surge in non-performing loans (NPLs) within the Ghanaian banking sector was primarily attributable to four structural dimensions: macroeconomic volatility (manifesting as high inflation, elevated interest rates, cedi depreciation, and decelerating GDP growth); micro-prudential deficiencies (characterized by suboptimal underwriting capacity, weak credit risk governance, and information asymmetries in specialized sectors such as public road infrastructure); institutional and judicial bottlenecks (prolonged litigation procedures and regulatory enforcement challenges); and macro-fiscal imbalances (marked by persistent fiscal deficits).

The findings further reveal that the presence of poor underwriting practices and inadequate risk management have resulted in an uptick in NPLs figures in the banking sector over the past decade. Legal disputes, alterations in regulatory frameworks and judicial complexities have all influenced the transformation of loans into non-performing loans over the past decade. While these external factors could be intricate to navigate, they are paramount to comprehend for effective NPLs management.

The findings indicate that elevated non- performing assets (NPAs) constitute a persistent systemic challenge within the Ghanaian banking sector, averaging 18.14% over the 2016–2025 decade. Historically, these asset quality pressures have been acutely exacerbated by fiscal delays, specifically the accumulation of government arrears owed to contractors and third-party service providers. Furthermore, the banking environment during the period under review was severely constrained by macroeconomic instability, characterized by inflationary pressures, high commercial lending rates, aggressive monetary tightening by the Bank of Ghana, and continuous domestic currency depreciation. Ultimately, the structurally high level of NPAs in Ghana is sustained by a combination of macroeconomic volatility, fiscal bottlenecks, lax credit risk management frameworks, and a legacy of unmitigated toxic loans that have yet to be written off.

Empirical evidence indicates that key macroeconomic and structural vulnerabilities—namely rapid credit expansion, escalating sovereign debt, persistent local currency depreciation against major trading currencies, and the accumulation of government arrears to contractors—collectively exacerbate asset quality distress within the banking sector.

The study findings also reveal that Ghanaian banks with high non-performing assets (NPAs) or non-performing loans (NPLs) face severe financial, operational, and regulatory consequences that threaten their stability and ability to lend. The key implications for Ghanaian banks with high non-performing assets include reduced profitability, depletion of capital buffers, regulatory sanctions & strict directives, credit squeeze / credit crunch, high management and recovery costs and mandatory write-offs & willful defaulter penalties. Bad loans stop generating interest income, while banks are forced to set aside higher loan-loss provisions. This directly erodes net interest margins and net earnings. Provisioning bad loans eats into retained earnings and weakens the bank's capital adequacy ratio (CAR), limiting its capacity to absorb future shocks. Under the Bank of Ghana Regulatory Measures, banks are required to lower their NPL ratios to a ceiling of 10% by December 2026. Institutions that fail to comply face strict regulatory penalties, including restrictions on dividend payments, bonus distributions, and limitations on loan portfolio growth or business expansion. High NPLs lock up capital and make banks risk averse. Consequently, they cut back on new lending—affecting creditworthy businesses, households, and small-to-medium enterprises (SMEs). Managing distressed assets demands heavy financial and operational resources, including legal fees, collateral

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tracking, and restructuring expenses. The central bank mandates the write-off of fully provisioned, unrecoverable loans and enforces public sanctions—such as multi-year bans—against repeat willful loan defaulters

- *Bank of Ghana's Regulatory Measures to Reduce Non-Performing Loans in the Banking Sector (Notice No BG/.GOV/SEC/2025/23 and its Implications on the Sector*

The BoG measures, announced in August 2025, will require regulated financial institutions, including banks, to maintain their NPL ratios below a 10% prudential limit. Banks with NPL ratios exceeding 15% will immediately be restricted from paying dividends and bonuses, while those with ratios between 10% and 15% will be subject to restrictions after two consecutive years of failing to restore compliance with the limit. The Bank of Ghana's (BoG) mandate for commercial banks to cap their Non-Performing Loans (NPL) ratio at 10% (by December 2026, building on prior 2025/2026 enforcement targets) aims to clean up balance sheets, but it carries several direct and negative consequences for Ghana's banking sector. However, the persistence of high NPLs, driven by government legacy debt, structural and macroeconomic factors suggest that regulatory directive alone may be necessary but not sufficient to achieve a lasting solution. Problem loan foreclosures and restructurings are unlikely to materially reduce NPL ratios before the prudential limit becomes ineffective as court proceedings are slow and the cure periods before restructured NPLs can be reclassified as performing loans are usually lengthy. While banks remain committed to improving asset quality, the resolution of non-performing loans is often constrained by legal and institutional factors that operate beyond the direct control of individual institutions. In many cases, the recovery of impaired assets depends on slow judicial processes, weak collateral enforcement mechanisms, insolvency proceedings, and broader market conditions, all of which can significantly extend resolution timelines of December 2026.

Banks like NIB, ADB, UMB, Prudential Bank and CBG with higher non-performing loans (NPLs) directly correlate with capital erosion, as banks must set aside larger loan-loss provisions that eat into their core capital reserves and reduce profitability. ADB and NIB recorded the highest NPLs ratios of 70.5% and 69.7% as the end of December 2025 respectively. NIB's gross NPL ratio declined from 69.7 percent in 2025 to 66 percent in the first quarter of 2026.As of December 31, 2025, Consolidated Bank Ghana's (CBG) Non-Performing Loan (NPL) ratio was 33.4%, UMB NPL ratio was 52.2% while Prudential Bank NPL stood at 57%. This represented a significant sharp increase and deterioration in the bank's asset quality compared to the 12.5% NPL ratio recorded at the end of 2024. The key mechanics of capital erosion from NPLs of three state owned banks are mandatory provisioning, depletion of retained earnings, and solvency and lending constraints. When loans become non-performing, regulatory frameworks (such as those enforced by the Bank of Ghana) require banks to allocate earnings and capital to cover potential losses. Lower interest income and heavy impairment charges reduce current-period profits, which shrinks the internal capital generation that normally bolsters a bank's capital adequacy ratio (CAR). As capital reserves erode, a bank's buffer against insolvency weakens, forcing the institution to restrict new lending and prioritize internal balance-sheet consolidation. High provisions and impairment costs continue to strain net interest income and degrade Capital Adequacy Ratios (CAR), reducing the banks' capacity to absorb further financial shocks. Banks with NPL ratios exceeding 15% face an immediate ban on paying dividends to shareholders and bonuses to management. Fearing further NPL penalties, high-NPL banks often become overly risk-averse, cutting back sharply on new lending to the private sector, small and medium-sized enterprises (SMEs), and individuals. To rapidly drive down NPL ratios without organic economic recovery, banks often adopt extreme risk-aversion, freezing or drastically cutting credit lines to small and medium-sized enterprises (SMEs), agricultural entities, and retail borrowers who are perceived as higher risk. Studies specific to Ghana's banking sector (e.g., Boahene et al., Poku-Mensah) confirm that elevated credit risk and high NPL ratios significantly diminish bank financial performance and capital strength.

VI. POLICY RECOMMENDATIONS

First, clearing legacy debts, particularly government - backed arrears and SOEs debt, is a critical step for improving non-performing loans in the Ghanaian banking sector. Unpaid government debt to contractors (e.g., energy sector arrears, road contractor debt) often leads to these contractors defaulting on their bank loans, directly driving up NPL ratios. To help banks build stronger capital, increase profitability, and expand private sector lending, the government, through the Ministry of Finance, must clear its legacy energy and road contractor debts. Doing so is critical for achieving the Bank of Ghana's target of lowering the non-performing loan (NPL) ratio to 10% by December 31, 2026. Swift clearance of government arrears to private entities is necessary to reduce the accumulation of new bad loans could go a long way to improve on the high non-performing loans in the banking sector. The government's continued efforts in settling arrears are essential for enhancing banks' balance sheets as a substantial portion of NPLs is linked to state-related liabilities. The government must endeavor to clear all arrears to suppliers, independent power producers, road contractors could lower NPLs, if Ministry of Finance have fiscal space to make repayments larger scale. The clearance of government arrears to banks' clients must be topmost priority to reducing the high non-performing assets in the banking industry which have bedeviled the sector. In 2026-2027, the Ghanaian authorities, Ministries of Finance, Energy and Roads and Highways must put in place a repayment plans to clear all domestic arrears to creditors (especially small, medium and bigger enterprises like what in 2011, the Gabonese authorities put in place a repayment plan to clear domestic arrears to creditors (especially small and medium enterprises) under the Club de Libreville arrangement. Other examples can be found in Chapter 3 of IMF (2019c). The persistence of high NPLs, driven by government legacy debt, structural and macroeconomic factors over the decade suggest that regulatory directive alone may be necessary but not sufficient to achieve a lasting solution. The Bank of Ghana and Ministry

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of Finance should join forces on a comprehensive repayment strategy for government legacy debt to help ease non-performing loan pressures in banks.

Second, the Government of Ghana and Bank of Ghana must be committed to promoting a strong, stable, and viable banking industry to support robust macro-economic growth in terms of stable exchange rate, lower inflation, lower policy rate, lower fiscal deficits, positive terms of trade and manageable public debts that could impact positively on the NPLs in the banking sector. Macroeconomic stability, characterized by low and stable inflation, manageable debt levels, sustainable fiscal and external balances, and a sound financial system, fosters a predictable environment that encourages private sector confidence and investment. The Bank of Ghana should also strength its monitoring framework which comprises of macroeconomic prudential indicators such as inflation and real effective exchange rate in assessing the stability and soundness of the banking system. Without a long macroeconomic stability, the Ghanaian banks cannot reduce the endemic non-performing loans in the banking sector which have bedeviled the industry for the past decade. Long term macroeconomic stability is very critical for banks' capital management planning, forecasting and overall building a strong and vibrant banking sector that not only create sustainable capital buffers but also boost up solvency, liquidity and creating shareholder value. Macroeconomic stability is the cornerstone of any successful effort to increase private sector development and economic growth that enables the banking sector to improve the NPLs because of lower inflation and stable exchange rates. To enhance macroeconomic stability, Ghana needs to support macroeconomic policy with structural reforms that strengthen and improve the functioning of these markets and sectors. Prudent macroeconomic policies can result in *low and stable inflation, stabilize the local currency* which could contribute to lowering the NPLs in the banking sector. Inflation hurts the poor by lowering growth and by redistributing real incomes and wealth to the detriment of those in society least able to defend their economic interests.

Bank of Ghana should also strength its monitoring framework which comprises of macroeconomic prudential indicators such as inflation and real effective exchange rate in assessing the stability and soundness of the banking system. A growing economy improves the ability of individuals and businesses to repay their loans (service their debt), which directly reduces the level of non-performing loans (NPLs) or NPAs in the banking sector. Ghana's stable macroeconomic environment is a prerequisite for a healthy private sector and a resilient banking system with low NPAs. This dynamic ensures that banks can continue to lend, thus sustaining the cycle of economic development.

Third, the government should address the persistent fiscal weaknesses that have created vulnerabilities in the banking sector, particularly rising NPLs over the past decade. To address persistent fiscal weaknesses and curb rising non-performing loans (NPLs) in the banking sector—such as in Ghana, where NPL ratios have averaged over 18.07% and exceeded the 10% global benchmark—the government and monetary authorities must pursue coordinated fiscal, structural, and regulatory reforms. The government must systematically pay off all outstanding arrears owed to contractors, service providers, and Independent Power Producers (IPPs) / energy sector creditors. These unpaid obligations directly disable borrowers from servicing their bank loans. The government must avoid new accumulation through enforcement strict public financial management rules to prevent new domestic payment arrears from building up. The government must strengthen fiscal discipline and macroeconomic stability by adhering strictly to fiscal consolidation targets, primary surplus goals, and expenditure rationalization frameworks to stabilize inflation, interest rates, and the local currency. The government must curb dominance in economic activity by rebalancing state involvement in the economy to lessen crowding-out effects and reduce reliance on implicit government guarantees when banks lend to state-linked entities or contractors. A robust fiscal policy framework is a prerequisite for macro-financial stability, which fundamentally underpins the resilience of the banking sector. To safeguard systemic financial stability, state authorities must systematically liquidate legacy sovereign obligations linked to non-performing assets (NPAs), restructure or refinance outstanding public arrears, and decisively resolve distressed banking institutions

Fourth, the Ministry of Finance and Bank of Ghana should consider further measures to mitigate high non-performing loans (NPLs), notably through the establishment of Asset Management Companies (AMCs). Beyond conventional recovery mechanisms, effective strategies include accelerated loan write-offs and the deployment of specialized, publicly or jointly backed AMCs. These entities are structurally independent organizations mandated to acquire, manage, and divest distressed assets from domestic private and state-owned commercial banks affected by prolonged sovereign arrears. The utilization of specialized Asset Management Companies (AMCs) to absorb elevated volumes of non-performing loans (NPLs) remains a central component of toxic asset mitigation strategies. While accelerated write-offs and off-balance-sheet NPL transfers effectively lower institutional NPL ratios, these mechanisms alter the manifestation of asset quality impairment rather than resolving its systemic root causes. Although asset transfers provide immediate balance sheet relief, historical precedents in jurisdictions such as Angola, Nigeria, Togo, and Zimbabwe demonstrate that this approach frequently culminates in severe operational losses for AMCs or exacts a heavy fiscal toll on governments required to sustain their liquidity. AMCON plays a pivotal role in strengthening the banking sector by removing non-performing loans (NPLs) from commercial balance sheets. This intervention directly optimizes liquidity, improves asset quality, and boosts capital adequacy ratios, allowing financial institutions to normalize their core lending operations. The corporation is tasked with efficiently managing and recovering value from acquired assets and underlying collateral through targeted loan restructuring, business takeovers, and strategic asset divestments (including real estate and securities). As a core stabilizing tool for the Nigerian economy, AMCON's timely interventions prevent systemic bank collapses and safeguard

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the broader financial system from catastrophic failure. Funded initially by the Federal Government and the Central Bank of Nigeria (CBN), AMCON's ongoing operations are supported by a sinking fund known as the Banking Sector Resolution Cost Fund, which is sustained through an annual levy on commercial banks' total assets. To guarantee robust debt recovery, the corporation is backed by unique legal provisions that allow it to aggressively pursue non-cooperative debtors and attach unpledged assets. Overall, AMCON serves as an essential intervention mechanism that restores investor confidence and builds a more resilient financial environment. In a similar strategic move, the Ghanaian Ministry of Finance is looking to mirror the AMCON model to aggressively manage and resolve the rising tide of non-performing assets in Ghana's banking sector

Fifth, addressing the decade-long persistence of non-performing loans (NPLs) in Ghana's banking industry requires foundational reforms in institutional governance and operational architecture. Drawing on the best international practice standards, governing boards and management must actively endorse and monitor asset-quality recovery strategies. Particularly for high-NPL institutions, the NPL strategy must constitute a core pillar of the overarching business strategy—formulated and driven by executive management with regular statutory reporting to the board.

According to the European Central Bank (2017) guidelines, corporate governance structures—specifically the board of directors and executive management—bear ultimate accountability for managing non-performing loans (NPLs). This oversight framework dictates that senior leadership must formally approve and review the institutional NPL strategy and its corresponding operational plans on at least an annual basis. Operationally, the management body is tasked with supervising strategic execution, establishing explicit quantitative and qualitative performance metrics, and aligning management incentives with NPL resolution outcomes. Furthermore, robust risk governance requires a minimum of quarterly monitoring to evaluate progress against established strategic milestones. Leadership must also implement structured authorization protocols for NPL resolutions, mandating direct board intervention for material, high-value exposures. To institutionalize these practices, management is responsible for ratifying comprehensive NPL policies, fostering organizational alignment through staff-wide training, and enforcing rigorous internal controls. These internal control mechanisms must strictly scrutinize asset classification, loan-loss provisioning, collateral valuation methodology, and the long-term viability of forbearance frameworks. Ultimately, both board members and key executives must possess specialized expertise in distressed asset management and dedicate operational capacity to NPL remediation that is directly proportionate to the institution's underlying credit risk profile.

Sixth, to address the persistent NPLs in the banking industry, the board of directors and executive management of Ghanaian banks should implement a well-designed credit risk management framework that has been considered a must for a best-practicing bank. A well-designed credit risk management framework in Ghana's banking sector aligns with Bank of Ghana (BoG) regulatory directives under the Banks and Specialized Deposit-Taking Institutions Act, 2016 (Act 930) and international standards like Basel II/III. The core components of the credit risk management framework must include governance and board oversight, the full credit cycle management, rigorous credit appraisal, credit concentration risk management, portfolio monitoring & early-warning systems and independent verification. The Board of Directors holds ultimate accountability for setting risk appetite, approving lending policies, defining loan types and maturities, and ensuring reliable Management Information Systems (MIS). Structured to cover the end-to-end lifecycle—comprising origination, credit appraisal, administration, monitoring, and recovery. Evaluation of borrowers using character, capacity, capital, collateral, and conditions (such as financial statement analysis and cash-flow projections). Adherence to the Bank of Ghana Guidelines on measurement and management of credit concentration risk to prevent over-exposure to single counterparties, sectors, or connected groups. Active tracking of Non-Performing Loans (NPLs), Portfolio at Risk (PAR), and IFRS 9 asset quality classifications to spot defaults before they escalate. Internal Audit functions independently verify policy compliance, while credit risk officers continuously review risk-weighted assets to protect capital adequacy buffers. Commercial banks should be immediately required to strengthen their internal controls and risk management practices, including strengthening their credit risk assessment, legal perfection of collateral, monitoring, and collection systems as well as debt collection. Putting such a framework into practice would be expected to increase operational efficiency. If the risk management framework does not work, a plan for the reduction of NPLs is necessary.

Seventh, Ghanaian banks can reduce non-performing loans (NPLs) through a multi-faceted approach centered on improving internal risk management systems and timely credit risk assessment and forecasting. A robust risk management framework, as advocated by the Bank of Ghana, involves implementing stronger loan origination standards and conducting thorough due diligence on all applicants. A multifaceted approach is indeed essential for banks to effectively manage high non-performing loans (NPLs). By combining robust preventative measures with proactive resolution strategies, financial institutions can stabilize their portfolios and improve long-term resilience Banks must employ advanced tools to forecast potential credit risks and identify emerging trends in the loan portfolio. Ghanaian banks could reduce non-performing loans by improving their internal risk management systems, timely assessing and forecasting credit risk, implementing mechanisms for early response to borrower's affairs, and conducting stress testing of the largest bank borrowers. To maintain financial stability and profitability of the Banks, it is crucial to reduce Nonperforming assets (NPLs). To maintain financial stability and profitability of the Banks, it is crucial to reduce non-performing assets (NPLs). NPLs are loans and advances that have stopped generating income for the bank because the borrower has failed to repay them. Reducing NPLs is an ongoing process that requires a combination of prudent

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lending practices, effective risk management and adaptability to changing economic conditions. Ghanaian banks must adopt the following strategies – review and refine them to reduce NPLs and maintain healthy portfolio of loans to bring the NPLs ratio to acceptable levels. Banks must utilize data analytics and early warning systems allows banks to identify potential stress in loan accounts before they become non-performing. This enables timely intervention and communication with borrowers facing initial financial difficulty. Banks must ensure transparency, accountability, and strong governance within the bank to prevent politically or commercially motivated poor lending decisions.

Eighth, the Bank of Ghana (BoG), in its supervisory capacity, should leverage the inherent flexibilities within existing regulatory and accounting frameworks to mitigate the adverse effects on bank capitalization. Surging non-performing loans (NPLs) erode net income and undermine solvency positions; consequently, where capital buffers have been deployed beyond regulatory minimums, institutions should be permitted to draw down their capital conservation buffers. Furthermore, for Sub-Saharan African (SSA) jurisdictions transitioning toward Basel III compliance, a sequenced and phased implementation timeline for capital adequacy mandates warrants active consideration. "Banking institutions facing significant deterioration in asset quality and subsequent capital depletion are required to formulate actionable capital restoration plans under active supervisory monitoring. In instances where such plans lack credibility—posing a severe threat to systemic stability and rendering traditional resolution mechanisms ineffective—national authorities may need to evaluate public sector interventions. Concurrently, the Bank of Ghana, acting as both regulator and supervisor, should incentivize enhanced credit risk frameworks to address the structural drivers of NPL proliferation. Leveraging regulatory instruments—such as IFRS 9 impairment standards, Basel III capital and liquidity buffers (e.g., the Liquidity Coverage Ratio), and macroprudential measures like loan-to-value (LTV) and debt-to-income (DTI) ceiling remains critical to containing credit risk accumulation

Ninth, to mitigate the systemic risk posed by high non-performing assets (NPAs) within Ghana's banking sector, a coordinated strategic intervention by the executive and judicial branches—specifically led by the Attorney General and Minister of Justice, alongside the Chief Justice—is imperative. This requires structural reforms in commercial court processes and debt-recovery legislation to accelerate collateral realization and contract enforcement, thereby reducing asset recovery timelines. Protractedly weak debt enforcement procedures and inadequate creditor protection frameworks continue to severely compromise the banking sector's capacity to resolve distressed assets. Consequently, despite the legislative intent of the *Borrowers and Lenders Act, 2020 (Act 1052)*, banks suffer substantial collateral enforcement delays, keeping the industry's non-performing loan (NPL) ratio elevated at approximately 18.90% as of December 2025. This institutional deficit contrasts sharply with proactive legal and judicial frameworks adopted across Sub-Saharan Africa (SSA) to fortify credit enforcement. Empirical evidence indicates that peer nations have streamlined credit claims through advanced court automation, such as electronic payment systems and published judgments (e.g., Rwanda, Zambia), digitized case filing (Namibia), specialized commercial benches (Ethiopia), and comprehensive collateral registries (Zambia). Furthermore, regional advancements in modernizing corporate and personal insolvency frameworks—notably through updated insolvency codes and the professionalization of insolvency administrators (e.g., Cabo Verde, Liberia, Malawi)—have materially enhanced bank asset-recovery values via expedited corporate rehabilitation or liquidation. Cultivating similar structural reforms in Ghana is essential, particularly as the continent moves toward a harmonized pan-African insolvency regime designed to optimize the operations of the African Continental Free Trade Area (AfCFTA)

Tenth, although regulatory directives imposed by the Bank of Ghana provide a vital baseline for constraining credit risk, sustainable resolution requires the Ministry of Finance and the monetary authority to engineer a functional secondary market for distressed assets in the medium to long term. Characterizing high non-performing loans (NPLs) exclusively as a sign of institutional weakness overlooks their potential to catalyze market deepening. Persistently high NPL ratios provide a compelling economic rationale for structured financial mechanisms—including securitization, factoring, and secondary debt markets—which optimize price discovery, augment market liquidity, and facilitate efficient risk dispersion (Ghana Association of Banks Policy Brief, 2026).

Eleventh, addressing the systemic challenge of elevated non-performing loans (NPLs) in Ghana's banking sector requires a targeted institutional intervention. It is recommended that the Government of Ghana—through the Office of the Attorney-General and Ministry of Justice—in partnership with the Bank of Ghana, establish specialized financial and commercial tribunals. Staffed by jurists and domain experts in banking law, financial regulation, digital finance, and forensic accounting, these specialized benches are positioned to streamline protracted debt-recovery litigation. By replacing generalized lower-court workflows with specialized commercial procedures, such a framework reduces legal uncertainty, curtails dilatory defense tactics by wilful defaulters, and accelerates the enforcement of security interests. This judicial specialization aligns with broader national development objectives—improving contract enforcement, strengthening the investment climate, and alleviating severe court backlogs—while directly supporting the Bank of Ghana's prudential mandate requiring regulated financial institutions to cap their NPL ratios at 10%. Consequently, expediting dispute resolution unfreezes immobilized capital, restores credit velocity in the real economy, and reinforces macroeconomic stability

Lastly, the empirical findings yield critical policy implications for macroeconomic and macroprudential frameworks. First, given the systemic ramifications of non-performing loans (NPLs) and the demonstrable impact of idiosyncratic, bank-level determinants on asset quality, there is a compelling case for intensifying regulatory supervision.

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Proactive oversight is essential to preempt rapid NPL accumulation. This can be achieved by curbing credit overexpansion, enforcing rigorous underwriting standards, and restricting unhedged foreign currency exposure among borrowers. Second, because elevated NPL ratios persistently constrain macroeconomic performance—principally by compressing bank credit supply, a swift yet orderly balance sheet decontamination is imperative. Although asset resolutions should ideally be driven by banks through coordinated, mutually beneficial credit restructuring, regulatory authorities must adopt a more proactive stance. Specifically, policymakers should eliminate existing fiscal, legal, and regulatory bottlenecks to facilitate accelerated portfolio optimization, ensuring the process remains non-disruptive and aligned with institutions' loss-absorption capacities (IMF Working Paper, 2013).

REFERENCES

[1]. Agarwala, N and Agarwala, V, (2019). A critical review of non-performing assets in the Indian banking industry. Rajagiri Management Journal. Published by Emerald Publishing Limited.

[2]. Ali, A., & Daly, K. (2010). Macroeconomic determinants of credit risk: Recent evidenced from a cross- country study. International Review of Financial Analysis, 19(3), 165–171

[3]. Allison. N (2018). The effects of bank regulators and external auditors on loan loss provisions. Journal of Accounting and Economics 66: 244–65.

[4]. Almaqtari, F. A., Al-Homaidi, E. A., Tabash, M. I., & Farhan, N. H. (2018). The determinants of profitability of Indian commercial banks: A panel data approach. International Journal of Finance and Economics, 24(1), 168–185

[5]. Alshebmi, A. S., Adam, M. H. M., Mustafa, A. M., Thomran, M., & Fathelbab, O. E. A. (2020). Assessing the Non-Performing Loans and their Effect on Banks Profitability: Empirical Evidence from the Saudi Arabia Banking Sector. International Journal of Innovation, Creativity and Change, 11(8), 69-93

[6]. Alton, R.G. and Hazen, J.H. (2001) As Economy Flounders, Do we see A Rise in Problem Loans? Federal Reserve Bank of St. Louis.

[7]. Ambarkhane, D., Singh, A. S., & Venkataramani, B. (2022.). Measurement and Analysis of the Productivity of Indian Banks.

[8]. Amuakwa-Mensah, F., & Boakye-Adjei, M. (2015). Determinants of non-performing loans in Ghana banking industry. International Journal Computational Economics and Econometrics, 5(1), 35-54

[9]. Asiama, R. K., & Amoah, A. (2019). Non-performing loans and monetary policy dynamics in Ghana. African Journal of Economic and Management Studies, 10(2), 169–184

[10]. Aiyar, Shekhar, Wolfgang Bergthaler, Jose M. Garrido, Anna Ilyina, Andreas (Andy) Jobst, Kenneth Kang, Dmitriy Kovtun, Yan Liu, Dermot Monaghan, and Marina Moretti, (2015), "A Strategy for Resolving Europe's Problem Loan," IMF Staff Discussion Note 15/19, International Monetary Fund, Washington

[11]. Bank of Ghana Monetary Policy Report January 2025 Research Department, Bank of Ghana MPC Report – January 2025

[12]. Bank of Ghana's various MPC reports on banking sector development 2014-2024 Research Department Bank of Ghana MPC various reports

[13]. Bayar, Y. (2019). Macroeconomic, Institutional and Bank-Specific Determinants of Non-Performing Loans in Emerging Market Economies: A Dynamic Panel Regression Analysis. Journal of Central Banking Theory and Practice, 8(3), 95–110

[14]. Beck, R., Jakubik, P., & Piloiu, A. (2015). Key determinants of non-performing loans: New evidence from a global sample. Open Economies Review, 26(3), 525–550.

[15]. Bercoff, J.J., Giovanni, J.d. and Grimard, F. (2002) Argentinean Banks, Credit Growth and the Tequila Crisis: A Duration Analysis, Working Paper, Unpublished

[16]. Berger, N.A. and De Young, R. (1997) 'Problem loans and cost efficiency in commercial banks, Washington DC', Journal of Banking and Finance, Vol. 21, No. 6, pp.849–870

[17]. Berger, A.; DeYoung, R. (997) Problem loans and cost efficiency in commercial banks. Journal of Bank& Financial 1997, 21, 849–870

[18]. Bernanke, B. S., Gertler, M., & Gilchrist, S. (1999). The financial accelerator in a quantitative business cycle framework. Handbook of Macroeconomics, 1, 1341–1393

[19]. Bhaskaran, R., Bhalla, L., Sarin, V., Kaur, S., Rahman, A., Singh, G., Bhattacharya, A.M., Jha, A.K. and Verma, P. (2016), "Non-performing assets of public and private sector banks in India – a comparative study", International Journal of Services and Operations Management, Vol. 25 No. 2, pp. 155-172

[20]. Boss, M, Gerhard F, Johannes P, Claus P, Schneider, M and Ubl, E. (2009). Modeling credit risk through the Austrian business cycle: An update of the OeNb model. Financial Stability Report 17: 85–101.

[21]. Boudriga, Abdelkader, Neila Boulila Taktak, and Sana Jellouli. (2009). Banking supervision and nonperforming loans: A cross-country analysis. Journal of Financial Economic Policy 1: 286–318

[22]. Boudriga, A., N. Boulila Taktak and S. Jellouli, (2010). "Bank Specific, Business and Institutional Environment Determinants of Banks Nonperforming Loans" Evidence from MENA countries," Economic Research Forum Working Paper 547. (Cairo: Economic Research Forum).

[23]. Bushman, R. M., and Williams C.D (2012). Accounting discretion, loan loss provisioning, and discipline of banks' risk-taking. Journal of Accounting and Economics 54: 1–18.

[24]. Caprio, G. and Klingebiel, D. (1999) Episodes of Systemic and Borderline Financial Crises, mimeo, World Bank

[25]. Cifter, A., Yilmazer, S., & Cifter, E. (2009). Analysis of sectoral credit default cycle dependency with wavelet networks: Evidence from Turkey. Economic Modelling, 26(6), 1382–1388

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov089

[26]. Chavan, P., & Gambacorta, L. (2016). Bank lending and loan quality: The case of India. BIS Working Paper No. 595
[27]. Chawla, S., & Rani, S. (2019). Conundrum of Non-performing Assets Over Two Decades: An Analysis of Punjab National Bank. Management and Labour Studies, 44(3), 263–284
[28]. Creane, S, Rishi Goyal, A. Mushfiq Mubarak, and Sab, R (2006). Measuring financial development in the Middle East and North Africa: A new database. IMF Staff Papers 53: 479–511
[29]. Dal Maso, L, Kanagaretnam, K; Lobo, G.J and Mazzi. F. (2022. Does disaster risk relate to banks' loan loss provisions? European Accounting Review, 1–30.Espinoza,
[30]. Dankwah, E (2025) Judicial inefficiencies and their impact on non-performing loans in the Ghanaian banking sector BFt.thebftonline.com
[31]. Demirgüç-Kunt A, & Detragiache, E (2002) Does deposit insurance increase banking system stability? An empirical investigation. J Monet Econ 49(7):1373–1406
[32]. Demirguc-Kunt, A and Detragiche, E (1998) The Determinants of Banking Crises in Developing and Developed Countries. IMF Staff papers. Vol 45 No 1 March 1998. International Monetary Fund
[33]. Dimitrios, A., Helen, L., & Mike, T. (2016). Determinants of non-performing loans: Evidence from Euro-area countries. Finance Research Letters, 18, 116–119
[34]. Dobler, Marc, Marina Moretti, and Alvaro Piris. (2020). "Managing Systemic Banking Crises. New Lessons and Lessons Relearned." Departmental Paper20/05, IMF Monetary and Capital Markets, International Monetary Fund, Washington, DC
[35]. Espinoza, R and& Prasad, A. (2010). Nonperforming loans in the GCC banking system and their macroeconomic effects. International Monetary Fund: Washington IMF Working Paper WP/10/224
[36]. Fernández de Lis, and Martínez Pagés, J, and Saurina. J (2000). Credit Growth, Problem Loans and Credit Risk Provisioning in Spain. Madrid: Banco de España. Servicio de Estudios.
[37]. Fofack, H. (2005) Non-Performing Loans in Sub-Saharan Africa: Causal Analysis and Macroeconomic Implications, World Bank Policy Research Working Paper No. WP3769
[38]. Gambera, M. (2000). Simple Forecasts of Bank Loan Quality in the Business Cycle. Chicago: Federal Reserve Bank of Chicago, vol. 23
[39]. Garr, D. K. (2013). Determinants of credit risk in the banking industry of Ghana. Developing Country Studies, 3(11), 64-77
[40]. Gour, D. R. (2021). Non-performing Assets and Profitability: Case of Indian Banking Sector. Vision: The Journal of Business Perspective, 180-191.
[41]. Ghana's Financial Stability Review (2024) Theme: Fostering Stability and Resilience.
[42]. Ghana's Financial Stability Review (2022) Managing Financial Stability
[43]. Risks in the Midst of a Difficult Macroeconomic Environment and Domestic Debt Exchange Programme (2022).
[44]. Goldstein, M. and Turner, P. (1996) Banking Crisis in Emerging Economies: Origin and Policy Options, BIS Economic Papers No. 46, Bank for International Settlements, Basle.
[45]. Gramckow, Heike; Walsh, Barry. (2013). Developing Specialized Court Services: International Experiences and Lessons Learned. Justice and development working paper series; no. 24. © World Bank.
[46]. Hennie, V. G. and Sonja, B. (2009). Analyzing banking risk: a Framework for assessing corporate governance and risk management, (3rd ed.). The International Bank.
[47]. IMF (2019) Financial Soundness Indicators Compilation Guide (2019 FSI Guide)
[48]. International Monetary Fund (IMF). (2020). Global Financial Stability Report: Markets in transition
[49]. IMF Country Report No. (24/213) on Ghana (2024) Second Review Under The Extended Credit Facility, Request for Modification of Performance Criteria and Financing Assurance Review IMF Washington USA
[50]. International Monetary Fund various country reports on Ghana's economy 2016-2025 Washington. USA
[51]. International Monetary Fund (2021) Resolving Nonperforming Loans in Sub-Saharan Africa in the Aftermath of the COVID-19 Crisis IMF Working paper DP/2021/014
[52]. International Monetary Fund (IMF), (2016), "Fostering Stability in a Low-Growth, Low-Rate Era," Global Financial Stability Report, October, Chapter 1, International Monetary Fund, Washington
[53]. IMF Country Report No. 11/131 (2011) on Ghana's Financial System Stability Assessment Washington DC June 2011
[54]. International Monetary Fund (2013; WP/13/72) Non-Performing Loans in CESEE: Determinants and Macroeconomic Performance; IMF Working Paper, European Department IMF
[55]. Jia, X. (2024). FinTech Penetration, Charter Value, and Bank Risk-taking. Journal of Banking & Finance 161: 107111
[56]. Kadioglu, E., Telceken, N., & Ocal, N. (2017). Effect of the Asset Quality on the Bank Profitability. International Journal of Economics and Finance, 9(7), 60–68
[57]. Kalemli-Ozcan, Sebnem, Luc Laeven, and David Moreno, (2015), "Debt overhang, rollover risk and investment in Europe", mimeo
[58]. Karunakar, M., & Saravanan, S. (2008). Are Non-Performing Assets Gloomy or Greedy from Indian Perspective? Research Journal of Social Sciences, 3, 4–12
[59]. Kemei, J. C., & Kerongo, F. (2014). The effects of information asymmetry in the performance of the banking industry: A case study of banks in Mombasa County. International Journal of Education and Research,
[60]. King, R. G., & Plosser, C. I. (1982). The behavior of money, credit, and prices in a real business cycle (no.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov089

w0853). National Bureau of Economic Research. Cambridge.
[61]. Klein, N. (2013). Non-performing loans in CESEE: Determinants and impact on macroeconomic performance. International Monetary Fund.
[62]. Kjosevski, J., & Petkovski, M. (2017). Non-performing loans in Baltic States: Determinants and macroeconomic effects. Baltic Journal of Economics,17(1), 25–44.
[63]. Kjosevski, J., Petkovski, M., & Naumovska, E. (2019). Bank-specific and macroeconomic determinants of non-performing loans in the Republic of Macedonia: Comparative analysis of enterprise and household NPLs. Economic Research-Ekonomska Istrazivanja, 32(1), 1185–1203.
[64]. Kwan, S., and R. Eisenbeis (1995) "An Analysis of Inefficiencies in Banking", Journal of Banking and Finance, Vol. 19, pp. 733-734
[65]. Karunakar, M., Vasuki, K. and Saravanan, S. (2008), "Are non-performing assets gloomy or greedy from Indian perspective?", Research Journal of Social Science, Vol. 3, pp. 4-12.
[66]. Laryea, A. E; Ntow- Gyamfi, M and Azuma, Azu, A (2016) Nonperforming loans and bank profitability: evidence from an emerging market. African Journal of Economic and Management Studies 7(4):462-481
[67]. Laeven, L., and T. Laryea (2009), "Principles of household debt restructuring", IMF Staff Position Note 09/15, International Monetary Fund, Washington, D.C
[68]. Lee, Chien-C, Chih-Wei W, Pei-Hsuan Hong, and Weizheng L. 2024. Environmental policy stringency and bank risks: Does green economy matter? International Review of Financial Analysis 91: 103040.
[69]. Louzis, D. P., A.T. Vouldis, and V.L. Metaxas.(2010). "Macroeconomic and Bank-specific Determinants of Nonperforming Loans in Greece: A Comparative Study of Mortgage, Business, and Consumer Loan Portfolios.", Bank of Greece Working Paper 118
[70]. Louzis, D. P., Vouldis, A. T., & Metaxas, V. L. (2012). Macroeconomic and bank-specific determinants of non-performing loans in Greece: A comparative study of mortgage, business and consumer loan portfolios. Journal of Banking & Finance, 36(4), 1012–1027
[71]. Manz, Florian. (2019. "Determinants of Nonperforming Loans: What Do We Know? A Systematic Review and Avenues for Future Research." Management Review Quarterly 69 (4): 351–89
[72]. Makri, V., Tsagkanos, A., & Bellas, A. (2014). Determinants of non-performing loans: The case of Eurozone. Panoeconomicus (pp. 61(2),193-206.). Panoeconomicus: 61(2)
[73]. Messai, A. S., & Jouini, F. (2013). Micro and macro determinants of non-performing loans. International Journal of Economics and Financial Issues, 3(4), 852–860.
[74]. Mitrakos, T., & Simigiannis, G. T. (2009). The determinants of Greek household indebtedness and financial stress. Bank of Greece Economic Bulletin, 32
[75]. Menicucci, E and Paolucci, G (2021) Gender Diversity and Bank Risk-taking : Empirical Investigation in Italy. Corp Gov Int. Bus Soc 22 (2) 317-339
[76]. Mpofu, Trust R., and Nikolaidou. E (2019. "Macroeconomic and
[77]. Bank-Specific Determinants of Non-Performing Loans in Sub-Saharan Africa." School of Economics Macroeconomic Discussion Paper Series 2019–02, School of Economics, University of Cape Town, Cape Town.
[78]. Nelmes, J, Antoshin, S, Aydin,Y, Kang, H. R Meeks,D Monaghan, A Pancorbo, Piontek, T and Tressel. T. (2021). "COVID-19 and Corporate-Sector Stress: Macro-Financial Implications and Policy Responses." IMF Money and Capital Markets Special Series on COVID-19
[79]. Nkusu, M. M. (2011). Nonperforming loans and macro financial vulnerabilities in advanced economies. International Monetary Fund
[80]. Osei, V and Olawale Oguloka, E (2022) Regime Effects of Fiscal Deficit Financing and Inflation Dynamics in Ghana: Theoretical Economic Letters: Vol 12 (1) pp258-286.
[81]. Ozili, P.K. (2020). Non-performing loans in European systemic and non-systemic banks. Journal of Financial Economic Policy. 12(3)
[82]. Ozili, Peterson K. (2019). Non-performing loans and financial development: New evidence. The Journal of Risk Finance 20: 59–81.
[83]. Ozili, Peterson K., and Erick Outa. (2017). Bank loan loss provisions research: A Review. Borsa Istanbul Review 17: 144–63
[84]. Piatti, D., and Cincinelli, P. (2019). Does the threshold matter? The impact of the monitoring activity on non-performing loans: Evidence from the Italian banking system. Managerial Finance. 45(2)
[85]. Pilbeam, K. (1998). International Finance: Great Britain: Ebbw Val
[86]. Prakash, S (2023) Strategies to reduce NPA in Banks: SVKM's Narsee Monjee Institute of Management Studies (NMIMS) India
[87]. Ramesh, K. (2019). Bad Loans of Public Sector Banks in India: A Panel Data Study. International Management Institute, 5(1), 22–30
[88]. Roman A, Bilan I (2015) An empirical analysis of the macroeconomic determinants of non-performing loans in EU28 banking sector. Rev Economică 67(2):108–127
[89]. Samir, & Kamra, D. (2013). A comparative analysis of non- performing assets (NPAs) of selected commercial banks in India. Opinion: International Journal of Management, 3(1), 68-80
[90]. Sapkota, J. (2004). Portion of NPA in Commercial Banks Highly in Public, Low in Private, New Business Age Kathmandu: Abhiyan Publication
[91]. Sarkar, N., & Nahar, S. (2017). The impact of owner-ship structure on bank credit risk: Evidence from Bangladesh. Eurasian Journal of Business and Economics, 10(19), 19-36

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov089

[92]. Schumpeter, J. (1934). The fundamental phenomenon of economic development. The Theory of Economic Development, 57-94
[93]. Singh A. (2013), "Performance of non-performing assets (NPAs) in Indian commercial banks International Journal of Marketing, Financial Services and Management Research, Vol. 2No. 9, pp. 86- 94
[94]. Sitepu, G. P. P., Irawati, N., & Nasution, F. N. (2023). The Influence of Capital Adequacy Ratio, Non-Performing Loan, Loan to Deposit Ratio, Operational Costs of Operational Revenue and Credit Distribution on Return on Asset with Net Interest Margin: Global Journal of Research in Business Management. Volume 03| Issue 06| Nov.-Dec. | 2023
[95]. Staehr, K., and Uuskula, L. (2020). Macroeconomic and macro-financial factors as leading indicators of non- performing loans: Evidence from the EU countries. Journal of Economic Studies.
[96]. Swami, O. S., Nethaji, B., & Sharma, J. P. (2022). Determining Risk Factors that Diminish Asset Quality of Indian Commercial Banks. Global Business Review, 23(2), 372–384
[97]. Us, V. (2018). The Determinants of Nonperforming Loans Before and After the Crisis: Challenges and Policy Implications for Turkish Banks. Emerging Markets Finance and Trade, 54(7),1608–1622.
[98]. Williamson, S. (1985) 'Financial intermediation, business failures, and real business cycles', Journal of Political Economy, Vol. 95, No. 6, pp.1196–1216
[99]. Zhang, X., Guo, D., Xiao, Y., & Wang, M. (2017). Do Spatial Spillover Effects of Non-performing Loans for Commercial Banks Exist? Evidence from Chinese Provinces. Emerging Markets Finance and Trade, 53(9), 2039–2051.