



GHANA

SELECTED ISSUES

August 2026

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July 10, 2026

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LESSONS FROM THE BANK OF GHANA'S DOMESTIC GOLD PURCHASE PROGRAMME¹

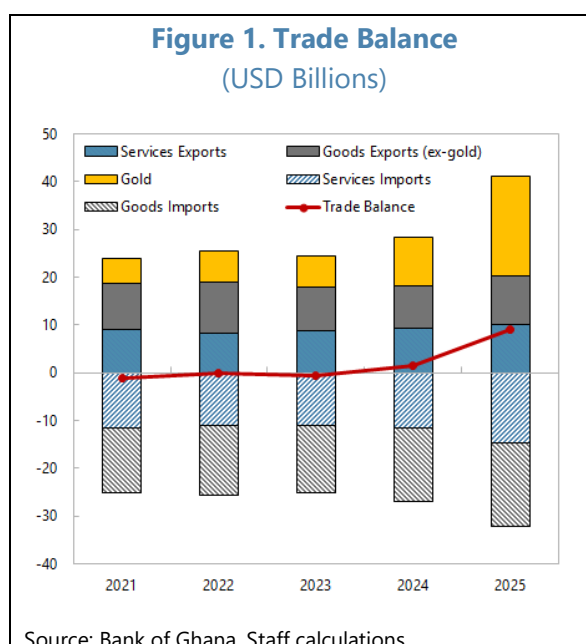
This Selected Issues Paper addresses the legacy of the Bank of Ghana's (BoG) Domestic Gold Purchase Programme (DGPP), which was announced in 2021 and mostly phased out by end-June 2026. This paper examines how the DGPP was instrumental in exporting US\$10.9 billion (9.5 percent of GDP) in artisanal gold in 2025 alone. The rapid expansion of the DGPP coincided and arguably contributed to a remarkable macroeconomic stabilization, but also large losses (US\$1.7 billion, 1.5 percent of GDP in 2025). Lessons from the DGPP should inform future gold sector policies in Ghana, including GoldBod, which fully took over operations and costs of the DGPP in July 2026.

A. Gold Production in Ghana

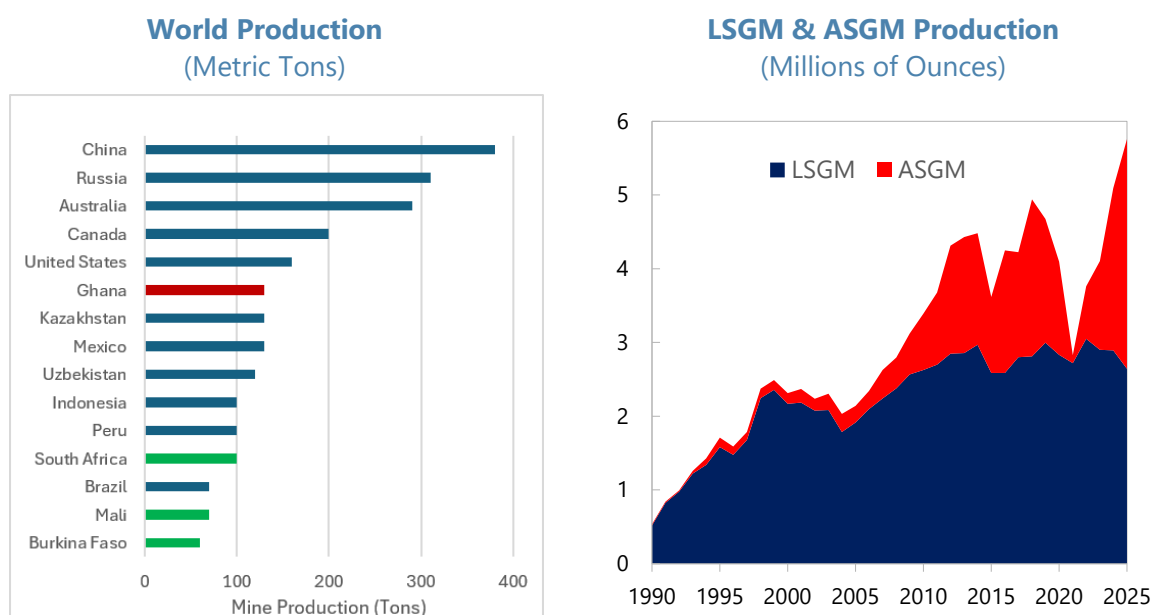
1. Gold has become the dominant driver of Ghana's external position (Figure 1). The precious metal has long been the country's most important export, but the sharp increase in gold prices, coupled with a reduction in smuggling and an increase in production, has meant that gold now accounts for more than half of total exports, from just a fifth in 2021. The corresponding surge in its gold export value led to a drastic improvement in Ghana's current account balance, rapid exchange rate appreciation, and improved debt sustainability.

2. Ghana is Africa's leading gold producer, and one of the most important globally

(Figure 2). Ghana's gold production is split between long-established large-scale mines (LSGM), and artisanal and small-scale mines (ASGM). LSGM operators include large multinational firms such as Newmont, AngloGold and Gold Fields. Newmont's Ahafo South mine is one of Africa's largest, and produced over 10 million ounces since its opening in 2006. Long the largest segment of the sector by exports, it has been outpaced by the surge in ASGM exports in 2025. The ASGM sector covers a spectrum of smaller firms or individuals, some licensed and some informal or illegal. ASGM activities are largely exempt from some or all forms of taxation applicable to large scale miners.



¹ Prepared by Guillaume Nolin (AFR).

Figure 2. Annual Gold Production

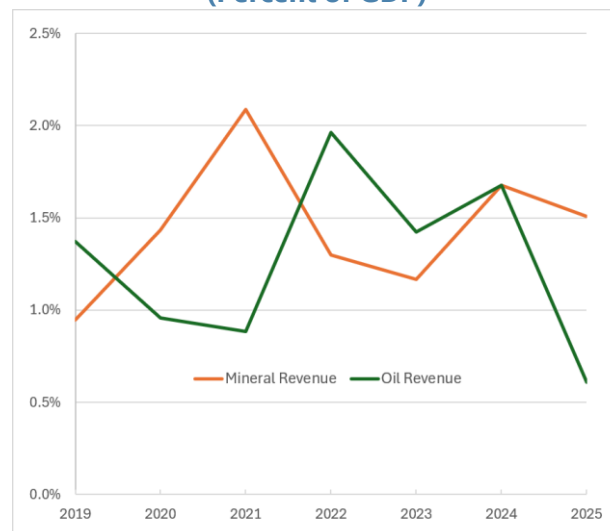
Source: U.S. Geological Survey

Source: Ghana Minerals Commission, Ghana Chamber of Mines

Large-Scale Gold Mining (LSGM)

3. LSGM is mature but contributes relatively little to fiscal revenues. Large-scale mining in Ghana is mostly operated by licensed multinational companies. The sector is mature, with output averaging between

2.5 and 3 million ounces annually for over a decade. Large-scale mining is subject to various forms of taxation, including royalties, corporate income taxes, the growth and sustainability levy and payroll taxes, as well as dividends from state participation in mining companies. Fiscal revenue from mining has fluctuated between 1 and 1.5 percent of GDP (Figure 3), which is comparable to fiscal revenues from the oil & gas sector, despite the latter's smaller output. The mining fiscal regime is considerably less transparent than that governing the oil & gas sector. Mining revenue reporting is incomplete and not timely, information disclosure is fragmented across institutions, and is not fully integrated into

Figure 3. Natural Resource Revenue (Percent of GDP)

Sources: Ghana Chamber of Mines, Ministry of Finance.

Mineral Revenue includes royalties, dividends and corporate income tax (self-reported by large-miners).

Oil Revenue includes royalties, surface rental income, dividends and corporate income tax.

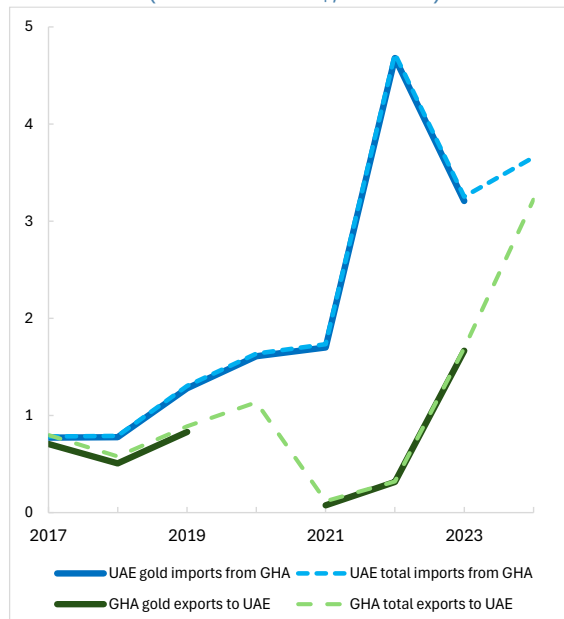
fiscal reporting or budget processes. In addition, although Ghana has adequate processes for openly and competitively awarding mining rights, they are rarely used. Several LSGM companies have also benefitted from fiscal stability agreements, often lasting more than 10 years, which have significantly lowered their tax burden. Important reforms to the mining tax regime are underway, including the introduction of a sliding scale for royalties in 2026 (see Fiscal Policy section of the Staff Report), which should significantly increase revenues.

Small-Scale Gold Mining (ASGM)

4. The ASGM sector is facing multi-faceted challenges. The ASGM sector has been present in Ghana for decades, although its share of total production did not exceed 10 percent until 2004.² ASGM production grew rapidly in the past two decades as the nominal price of gold decoupled, and overtook LSGM production for the first time in 2025. Reports show that ASGM activity is intensifying and spreading to new regions.³ The term “galamsey”, from “gather them and sell”, is often used colloquially to refer to illegal mining, even if it can sometimes refer to legal ASGM. The country has long faced challenges in formalizing its ASGM sector, including gold smuggling, difficulties in mobilizing fiscal revenue from the sector, and large-scale environmental degradation from illegal mining. Ghanaian authorities have repeatedly tried to address the problem, with initiatives such as legalizing ASGM in 1989, the early 1990s Small-Scale Mining Project, the creation of an Inter-Ministerial Committee on Illegal Mining in 2017 or the Community Mining Scheme launched in 2019.

5. Smuggling of ASGM production has been a critical problem in Ghana. The smuggling of ASGM gold outside of Ghana is estimated at 229 tons of gold worth US\$ 11.4 billion, which are missing from official trade data between 2019 and 2024. In 2023, the discrepancy between exports reported by Ghana and imports reported by the United Arab Emirates was more than US\$4 billion (Figure 4). To combat smuggling and to facilitate the BoG’s ASGM gold purchases, the government opted to remove all taxation on the ASGM sector in 2025 by eliminating a 1.5 percent withholding

Figure 4. Trade Data Discrepancies & United Arab Emirates
(Billions of US\$, Annual)



Source: United Nations Comtrade

² As per official data. See Minerals Commission Ghana (2015). [Artisanal & Small Scale Mining Framework](#).

³ See, e.g., Hunter, M., & Ofosu-Peasah, G. (2025). [Mapping Ghana's Expanding Gold Sector](#). Global Initiative Against Transnational Organized Crime

tax on unprocessed precious minerals.⁴ Further, in 2025, the government created a new entity, the Ghana Gold Board (GoldBod), whose mission is to regulate the gold sector, promote the responsible sourcing of gold, generate FX and support the accumulation of gold reserves by the Bank of Ghana (BoG). GoldBod was granted a monopsony on ASGM gold purchases, which it carries through a network of aggregators and traders, who source gold from miners.

6. ASGM gold mining is generating significant environmental degradation that increasingly carries significant macroeconomic costs. The rapid expansion and mechanization of ASGM has led to extensive land degradation and loss of vegetative cover, including on cocoa and food-crop farms and in forest reserves, reducing soil quality, raising erosion, and permanently withdrawing land from productive agriculture. This undermines a key export base, as cocoa farms in mining-affected districts are either abandoned or converted to short-lived mining sites. Widespread siltation (pollution of water by fine mineral particles) and contamination of rivers used for potable water are significantly raising costs for the Ghana Water Company. Environmental degradation could compound climate-related shocks by reducing watershed resilience, increasing flood and drought risks, and eroding ecosystems supporting agriculture and hydropower. Absent stronger enforcement and remedial measures, the environmental footprint of ASGM risks becoming a structural risk to agricultural productivity and long-term growth.

B. The Domestic Gold Purchase Programme (DGPP)

7. The DGPP was introduced in the context of the debt crisis. At the time of its launch in 2021, Ghana faced declining reserve buffers, exchange rate pressures, and tightening external financing conditions that led to a loss of access to international capital markets in 2022. The DGPP was thereafter used to procure fuel and rebuild international reserves, even as access to FX was severely constrained. Domestic gold purchase programs are not unique to Ghana: central banks and public agencies have used variants of domestic purchase windows, assaying and refining arrangements, and responsible-sourcing frameworks to formalize ASGM gold flows, improve traceability, and support reserve accumulation. The [London Principles on Central Bank ASGM Domestic Purchase Programmes](#), signed by the central banks of the Philippines, Mongolia, Ecuador, and Colombia, aim to establish international best practices.

8. The DGPP has rapidly scaled up, making the BoG the intermediary in virtually all ASGM gold exports (Figure 8). Ghana's DGPP stands out for its scale, which has rapidly become larger than all London Principles' four signatories' combined volume by 2025. From 2024 onwards, as macroeconomic stability was restored, the DGPP vastly expanded to absorb virtually all ASGM gold production. In 2025, the BoG purchased and exported around 104 tons of ASGM gold for \$10.9 billion (essentially all domestic output) as well as US\$1.26 billion of gold bullion (around 12 percent of large-scale mine's output). By 2025, the BoG had become the intermediary to virtually all recorded ASGM gold export proceeds, with GoldBod handling most sourcing operations. From

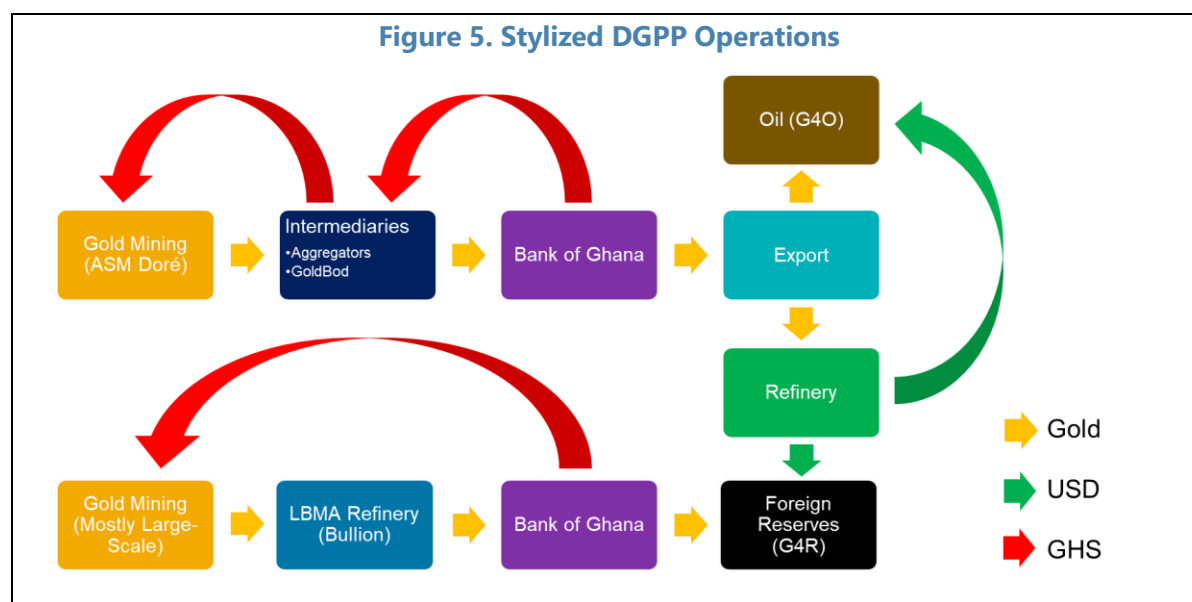
⁴ The 2025 Minerals and Mining (Royalties) Regulation Act introduces a 2 percent royalty on ASGM production starting in March 2026. It is unclear whether revenues have been collected so far.

the end of 2024, the DGPP's focus increasingly shifted from reserve accumulation toward FX sales to domestic banks, even if the BoG continued to significantly outperform ECF reserves targets.

9. The DGPP is an umbrella term for central-bank gold-related operations. DGPP operations involve the purchase of gold in cedis by the BoG, with Gold-for-Reserves (G4R) initially **aimed** at building reserves (either as bullion or via FX from ASGM gold sales) and Gold-for-Oil (G4O) aimed at financing oil imports (G4O was discontinued in May 2025). DGPP operations can be summarized in the following way (Figure 5):

- a. Bullion** purchases are straightforward: Ghanaian gold is refined into bullion abroad, in LBMA-certified refineries (mostly in Europe). This gold is mostly purchased at market price from large-scale gold mines, with a negligible amount from ASGM gold miners (in part because of sourcing requirements). This gold is then held in external vaults at foreign central banks or in bullion banks, and counts toward foreign reserves.
- b. ASGM doré gold** purchases are more complex: gold is first acquired domestically through GoldBod (acting as a broker), who sources it from aggregators, and is exported through private off-takers. Under G4R, the proceeds are placed in the country's foreign international reserves.
- c. G4O** was a variant on the G4R doré gold purchase channel. Instead of accruing to foreign reserves, physical gold (under the "barter" channel) or the proceeds of gold sales to refiners were used to purchase refined oil products for imports. These oil products were then distributed by the Bulk Oil Storage and Transportation Company (BOST, now BOSTenergies), a Ghanaian state-owned enterprise, which was itself financed by the BoG.

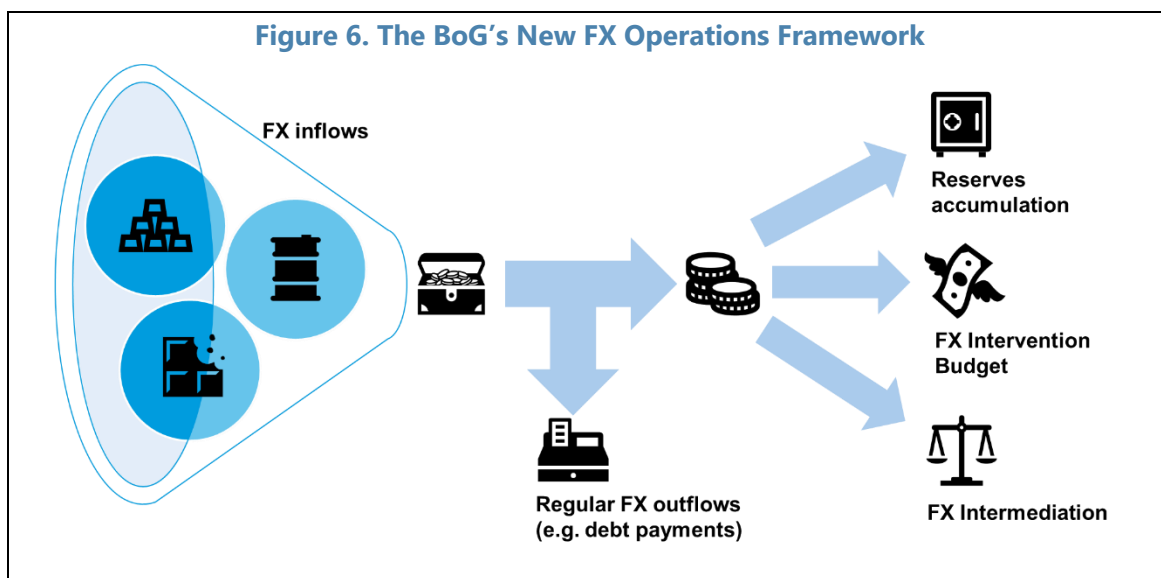
10. DGPP-related flows have become the predominant driver of BoG's FX cash flows and reserves accumulation. Annual gold-related inflows increased from US\$1.7 billion in 2023 to



US\$12.7 **billion** in 2025, including US\$1.1 billion in net gains from gold bullion sales; most of this increase came from the scaling up of ASGM purchases, as gold bullion purchases from large-scale mines grew from US\$800 million to US\$1.2 billion. Over the same period, total BoG FX inflows from other sources rose from roughly US\$6 billion to US\$8.3 billion. The DGPP has therefore been operationally central to the eightfold increase in gross international reserves since the beginning of the ECF-supported program, to US\$11.9 billion (about 4 months of imports) by end-2025—outperforming program goals by a significant margin.

11. The DGPP has enabled the BoG to undertake large-scale FX sales. The BoG, constrained by the inadequacy of its reserves, conducted FX sales for US\$1 billion in 2023. It started rapidly scaling up its FX sales in 2024, and sold US\$10.6 billion in 2025, or 9.2 percent of GDP. This amount is equivalent to 51 percent of total inflows, or 92 percent of DGPP-related inflows (excluding one-off bullion sales). The scaling up of FX sales improved FX market liquidity and coincided with a sharp appreciation of the cedi against the dollar (41 percent in nominal terms in 2025).

12. The BoG adopted a new FX operations framework to improve the transparency of its FX sales (Figure 6). In November 2025, the BoG implemented a new FX operations framework (with IMF TA). This framework envisages that inflows exceeding regular FX outflows, reserve accumulation needs, and FX intervention budgets would be “intermediated” to private banks through FX auctions. These auctions are pre-announced each month, a significant improvement in transparency from the previous ad hoc auctions or adjudications; the change helped the BoG reinforce the predictability of FX supply to the local FX market.



13. DGPP operations have generated significant losses for the BoG.

Losses in 2024 were equivalent to almost US\$400 million (0.5 percent of GDP), one third of which were related to G4O. In 2025, the significant scaling up of DGPP operations led to losses of over \$1.7 billion (1.5 percent of GDP), almost entirely related to G4R doré purchases; this amounted to a loss of 17 percent of the value of doré gold sold by the BoG. Losses accrued on gold trades are a combination of service and assay fees paid to GoldBod, discounts on gold sold to off-takers (exporters) and, most importantly, exchange rate losses from the spread between the forex bureau rate paid to purchase gold and the cedi reference rate

Figure 7. Spread Between Forex Bureau and BoG Reference Mid Cedi Rates (Percent)



Note: Data from June 2023 to April 2026.

used for BoG accounting (Figure 7). Survey data suggests that Ghanaian ASGM prices are among the highest in the region. These accounting losses partly reflect valuation effects rather than economic costs, but they still weaken the BoG balance sheet and imply transfers to recipients of FX at the reference rate: the BoG itself (when it accumulates reserves) or the recipients of BoG FX sales done at the reference rate. Losses have also accrued in operations related to the DGPP, notably G4O-related claims on BOST that were partly written off in 2024. These losses do not include the cost of sterilizing the reserves accumulated using the DGPP. The BoG's negative equity was 6.7 percent of GDP at end-2025 (Figure 9).

C. Prospects for the DGPP

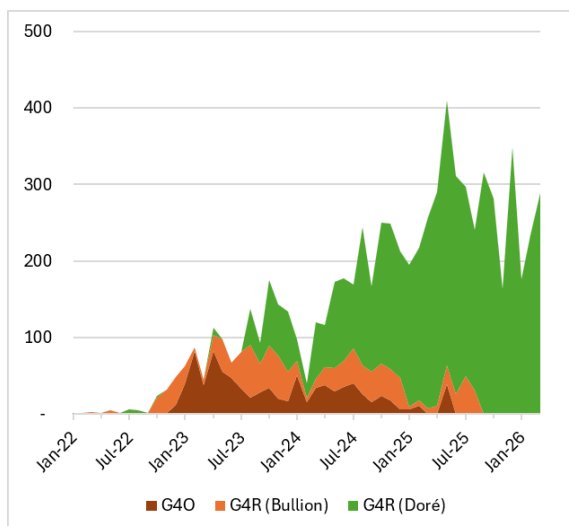
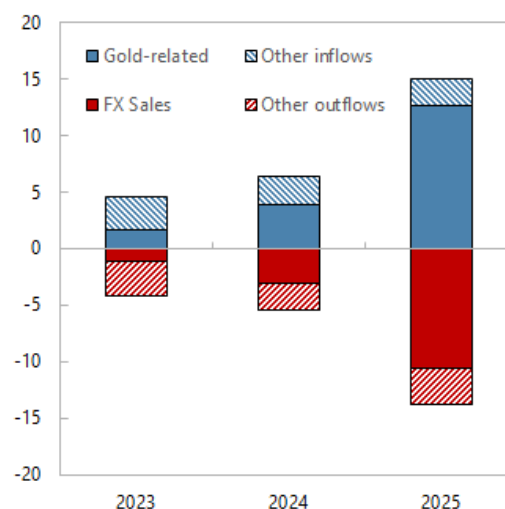
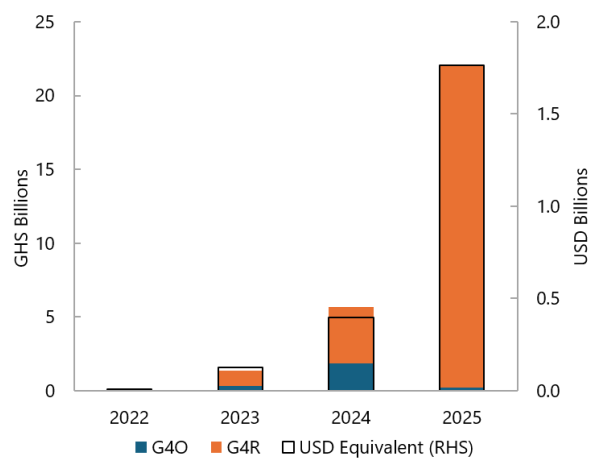
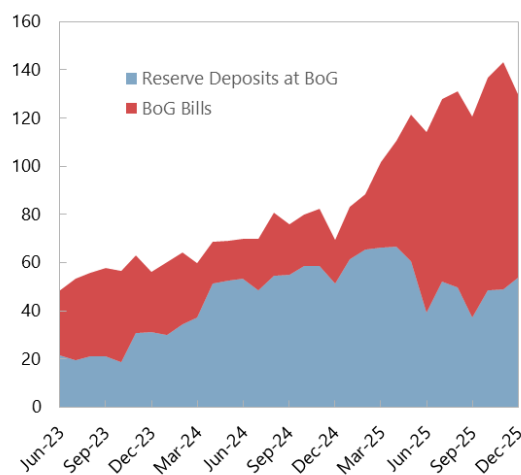
14. DGPP activities will be fully transferred to the GoldBod as of July 1, 2026. Under a memorandum of understanding, the BoG will fully exit the DGPP and will no longer be exposed to its quasi-fiscal financial risks in the future. It will continue to play a role as GoldBod's fiscal agent, and as a recipient of monetary gold for its reserves. All costs of the DGPP will be transparently assumed by the government. These costs are expected to be brought down to 5 percent of gold purchased; some progress has been made in 2026Q1, with these costs down from 14.5 percent (2025) to 11.4 percent. This was done notably through the halving of assay fees, service charges and other logistical costs. The spread between the forex bureau rate and the reference rate has also been reduced significantly in 2026Q2.

15. Ghanaian authorities intend to significantly scale up domestic gold purchases in coming years. Under the Ghana Accelerated National Reserve Accumulation Policy (GANRAP), domestic gold purchases will be the primary instrument to accumulate reserves to reach 15 months

of import coverage by 2028—significantly beyond Fund assessments of reserve adequacy requirements, which are estimated at 6 months of import coverage. The plan calls for the BoG to purchase twice as much LSGM gold as it had in the recent past, with a target of 30 percent of total output at a discount of 0.55 percent relative to international prices, refining it domestically, and validating it at a LBMA-certified South African refinery. This contrasts with earlier direct purchases by the BoG under G4R (up to 20 percent of volumes, but often significantly less), which were made at the international price and made once the gold was already refined. The plan also calls for slightly more ASGM gold purchases over the next three years than it did in 2025. The plan would have significant opportunity costs, but also significant sterilization costs: at 15 months of imports, the cost of open market operations alone would likely reach 3 percent of GDP (from 1 percent in 2025). GoldBod has also licensed a second aggregator to supplement Bawa-Rock, which supplied over 60 percent of ASGM gold exported in 2025.

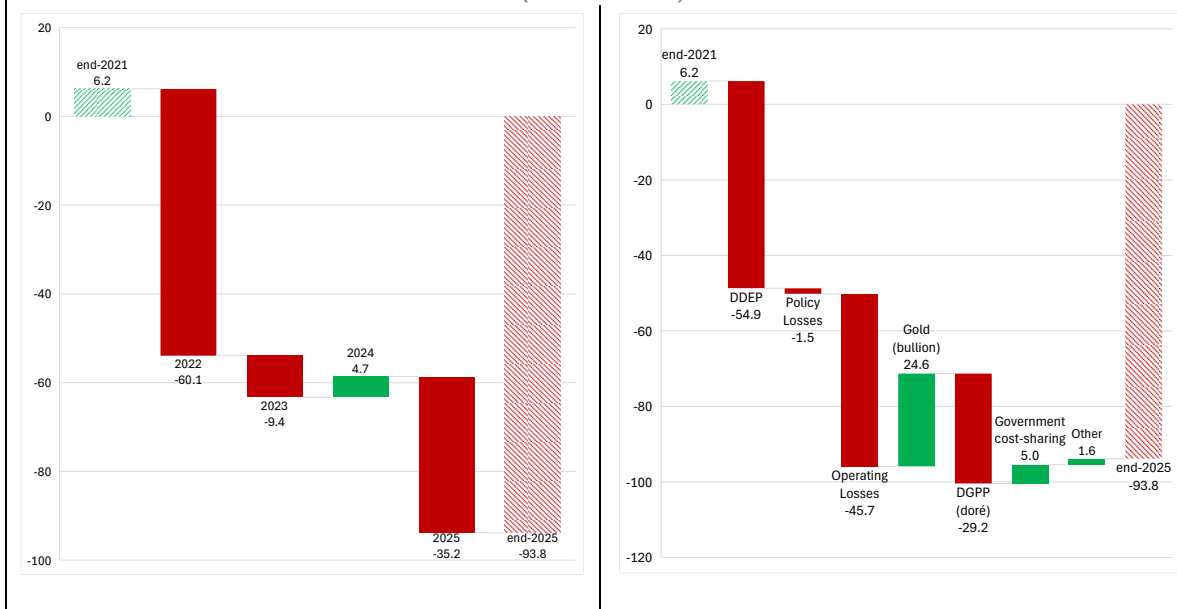
16. Responsible sourcing should be a central pillar of GoldBod’s operational framework.

GoldBod [has committed](#) to align its gold-sourcing practices with internationally recognized standards, including the OECD Due Diligence Guidance and the LBMA Responsible Gold Guidance, and to apply due diligence aimed at excluding gold linked to human rights abuses, forced or child labor, bribery, tax evasion, money laundering, terrorist financing, environmental violations, and labor-law breaches. GoldBod [has also committed](#) to assess suppliers’ and customers’ ESG practices, including environmental, health, labor, pollution-control, hazardous-chemical-management, community-relations, and fair-labor practices. These commitments build on the BoG’s earlier [responsible sourcing policy framework of the DGPP](#) and should be operationalized through stronger KYC/AML-CFT controls, risk-based supplier onboarding, traceability from mine site to export, and transparent reporting on gold purchases, costs, and operations. If credibly implemented, these reforms would strengthen the sector’s sustainability by reducing smuggling and illicit financial flows, improving transparency and auditability of ASGM gold flows, limiting environmental damage from galamsey, and progressively integrating Ghana’s ASGM sector into responsible international gold supply chains.

Figure 8. The Bank of Ghana's Domestic Gold Purchase Program**DGPP Monthly Gold Purchase**
(Thousands of ounces)**BoG's FX Cash Flows**
(Annual, USD billion)**DGPP Operational Losses**
(LHS: GHS billion, RHS: USD million)**BoG Liquidity**
(Monthly, GHS billion)

Sources: Bank of Ghana, Staff calculations

Figure 9. The Evolution of BoG Equity, 2021–25
(GHS billions)



Source: Bank of Ghana financial statements, IMF Staff calculations.

Notes: DDEP figures include losses on Government of Ghana and Cocobod securities and loans.

Policy losses are equal to interest income minus the cost of open market operations (OMOs, repos).

Operating losses include all operating profits and losses, except DGPP operations.

Gold (bullion) includes the proceeds from refined gold sales and gold price movements.

DGPP (doré) includes losses from G4R (doré) and G4O operations, in net terms before 2025.

Government cost-sharing is the GHS 5 billion cost sharing receivable at end-2025.

"Other" includes fair value changes, exchange rate differences recorded in other comprehensive income, impairment losses and gains (other than DDEP-related), taxes, changes in other reserves.

GHANA: FINANCIAL SECTOR RESILIENCE TO A SEVERE GOLD PRICE SHOCK¹

This paper assesses the resilience of Ghana's banking system and the Bank of Ghana (BoG) to a severe and persistent decline in gold prices. Despite significant post-DDEP (Domestic Debt Exchange Program) improvements in banking sector capitalization and profitability, Ghana's high dependence on gold exports continues to expose the financial system to commodity price volatility. Using two scenarios, a moderate and a severe gold price shock with macro-financial spillovers, the paper conducts joint stress tests of the balance sheets of the banking sector and the central bank. Results indicate that the banking system remains broadly resilient at the aggregate level under both moderate and severe shocks, although vulnerabilities persist among weaker

¹This analytical work was led by Concepcion Verdugo Yepes (AFR). The Banking and Central Bank Stress Testing were conducted jointly with staff from the Bank of Ghana: Dr. Philip Abradu-Otoo, Simon K. Harvey, Dr. Joseph Kofi Acquah (Research Department); Dr. Linda Portia McDave, Gilbert Obimpeh (Finance Department); Gershon Kojo P. Incoom, and Robert Otoo Duodu (Financial Stability and Macro-Prudential Research Department). Gayon Hosin (MCM), Guillaume Nolin, Rahul Raju, and Colin Cook (all AFR) provided helpful inputs to the paper.

institutions. In contrast, gold price shocks have a more pronounced near-term impact on BoG equity. Maintaining strong bank capital buffers, completing the resolution of remaining weak banks, and incorporating commodity risks into BoG recapitalization planning are key policy priorities.

A. Introduction

1. Gold is a macro-critical source of financial stability risk for Ghana. Despite stronger post-DDEP bank capitalization, profitability, and liquidity, high dependence on gold exports leaves the economy exposed to commodity price shocks through the exchange rate, inflation, fiscal revenues, sovereign risk, and bank balance sheets. Against this backdrop, the paper assesses how moderate and severe, persistent declines in gold prices would affect banks and the Bank of Ghana using joint stress tests. The results help identify key transmission channels, residual vulnerabilities, and priorities for supervision, central bank capital planning, and macro-financial risk management.

B. Structure of the Financial Sector

2. Ghana's financial system remains bank-dominated and concentrated, amplifying macro-financial transmission. Total financial sector assets rose from GHS 536.8 billion (45.6 percent of GDP) at end-2024 to an estimated GHS 644 billion (46.9 percent of GDP) at end-2025. Banks account for about 67.4 percent of total system assets—equivalent to 31.6 percent of GDP—placing them at the core of financial intermediation and shock transmission (Table 1).

3. Foreign-owned banks remain systemically dominant, while domestically owned and state-owned banks form a smaller but potentially more vulnerable segment. Foreign-owned banks held about 40.1 percent of financial sector assets in 2025, compared with 12.1 percent for domestic private banks and 15.2 percent for government-owned banks (Table 1). Concentration is high, with the five largest banks controlling about 45 percent of total banking assets, heightening the importance of institution-specific stress outcomes.

4. Non-bank institutions remain smaller than banks but could still amplify macro-financial stress. Specialized deposit-taking institutions (SDIs) account for about 6.5 percent of total financial sector assets, while non-bank financial institutions (NBFIs)—led by pension funds but also including insurance companies and securities firms—account for close to one quarter (Table 1). Their direct exposure to gold price shocks is limited, but they could still be affected indirectly through weaker asset quality, valuation losses, and confidence spillovers under an adverse macro-financial scenario. Credit unions are also small in system-wide terms (about 1 percent of total assets), but their concentration in household and small-scale lending could make them vulnerable to weaker incomes and rising credit risk under stress.²

² Credit unions alone serve nearly 1 million members (about 3 percent of the population), while the broader formal financial system reached an estimated 81 percent of the population in 2025; SDIs and NBFIs account for an important part of that coverage, though overlap prevents a precise aggregate estimate.

5. Capital markets remain shallow relative to banks, limiting direct transmission through market-based channels. Even so, the growing role of institutional investors, particularly pension funds, means that asset-price adjustments and confidence effects could still reinforce broader financial stress, even if direct gold-related exposures remain limited.

6. The BoG's balance sheet is large relative to the economy and the financial system. Central bank assets amount to about 16.3 percent of GDP at end-2025, underscoring the BoG's role in macro-financial transmission and balance-sheet risk. This is particularly relevant in the context of gold-price stress, given the BoG's role in reserve management, liquidity operations, and financial conditions.

Table 1. Ghana: Financial Sector Assets (2024–2025)

Banking Sector/Financial Sector	Number 2024	Assets, end-2024			Number In 2025	Assets, end-2025		
		In Billions of GHS	As Percent of Total Assets	As Percent of GDP		In Billions of GHS	As Percent of Total Assets	As Percent of GDP
Banks	23	368	69	31	23	447	67	32
Private	19	288	54	24	19	346	52	24
Domestic	5	55	10	5	5	80	12	6
Foreign	14	232	43	20	14	266	40	19
Government-Owned	4	80	15	7	4	101	15	7
SDIs	362	34	6	3	362	43	7	3
Savings and Loan Companies	26	10	2	1	26	13	2	1
Finance Houses	14	2	0	0	14	3	0	0
Leasing Finance Companies	2	1	0	0	2	1	0	0
Mortgage	na	na	na	na	na	na	na	na
Microfinance Insitution	177	3	0	0	177	3	0	0
Rural and Community Banks ¹	143	19	3	2	143	24	4	2
Forex Bureau								
Fintech	na	na	na	na	na	na	na	na
Development Banks ²	1	4	1	0	1	5	1	0
Credit Unions ³	214	5	1	0	238	7	1	0
Nonbank Financial Institutions	na	126	24	11	na	161	24	11
Insurance	44	20	4	2	44	24	4	2
Life Insurance	16	10	2	1	16	14	2	1
Non-life Insurance	25	8	1	1	25	9	1	1
Reinsurance	3	2	0	0	3	2	0	0
Pension Funds ⁴	na	86	16	7	na	109	16	8
SSNIT	na	22	4	2	na	29	4	2
Other Public	na	64	12	5	na	79	12	6
Private	na	na	na	na	na	na	na	na
Securities Industry (AUM excluding Pensions)	na	20	4	2	na	28	4	2
Total Financial System		537	100	46		663	100	47
Central Bank		215		18		230		16
Capital Markets								
Equities Market Cap ⁵		111				172		
GSE-CI Return (in percent)		56				79		
GSE-FSI Return (in percent)		25				95		
Fix Income Volume Trade		174				246		
Memorandum Items								
GDP		1176				1415		

Sources: Bank of Ghana and IMF Staff Calculations

1/ Bank of Ghana, Annual-Statistical-Bulletin-2024.pdf (Table 8), data for Rural Banks reflects 2022 data

2/ Development Bank of Ghana, Annual Publication FY 2024.pdf

3/ Bank of Ghana estimates based on Credit Union Association (CUA) database (there are 347 active credit unions. Number in 2024 and 2025 indicate credit unions that have reported to the headquarters' database).

4/ IMF estimates based in NPRA projections and SEC FM industry data (pension = 74% of HTM AUM of GHS 107.6 bn; securities= non-pension FM .

5/ Bank of Ghana: 2024 Annual Report and Financial Statements, Authorities data

C. Banking Sector Developments

Balance Sheet Strength and Capitalization

7. The banking system is in a stronger position to withstand a gold-price shock. The banking system has strengthened following the DDEP, though the recovery remains uneven across institutions. Total banking assets rose to GHS 446.9 billion by end-2025, supported by strong deposit growth and ample liquidity. Balance sheets, however, remain heavily tilted toward central bank and government instruments—together accounting for about 40 percent of total banking assets—reflecting continued risk aversion, subdued private credit demand, and a still-tight bank–sovereign nexus (Table 2).

Table 2. Ghana: Allocation of Banking Assets
(In percent of total banking assets)

Banking Assets	Dec-23	Dec-24	Dec-25
Cash, Bank Balances, and Short Term Funds	31	39	31
Foreign Assets	11	12	6
Domestic Assets	20	27	25
Total Investment Net	36	31	39
GoG Securities and Bonds	33	27	23
BOG Securities	6	5	16
Other Investments	1	1	1
Investment Impairments	-5	-3	-2
Net Loans	24	22	21
Public Sector Loans	2	2	1
Private Sector Loans	26	24	24
Loan Impairments/Interest in Suspense	-4	-4	-4
Property Plant and Equipment	3	2	2
Other Assets	6	7	7
Total	100	100	100

Source: Bank of Ghana and IMF staff calculations

8. Capital buffers have improved significantly even as regulatory forbearance is phased out. The system-wide capital adequacy ratio rose to about 22 percent by March 2026, from around 14 percent at end-2024.³ This improvement was driven by strong profitability—largely reflecting high returns on **BoG** instruments—and by cedi appreciation, which reduced the cedi value of foreign-currency-denominated risk-weighted assets.

9. Despite these gains, vulnerabilities persist among domestically owned and state-owned banks. While most banks are on track to meet regulatory capital requirements as remaining DDEP-related losses are fully recognized, a small number of institutions continue to exhibit weak capital positions, warranting close supervisory monitoring and timely corrective action.

Credit Intermediation and Asset Quality

10. Stronger balance sheets have not yet translated into a recovery in private sector credit intermediation. The transmission of monetary easing to the real economy through the credit channel remains weak, with the average loan-to-deposit ratio declining from about 55 percent in 2019 to around 29 percent by end-2025 as deposit growth continued to outpace loan expansion.

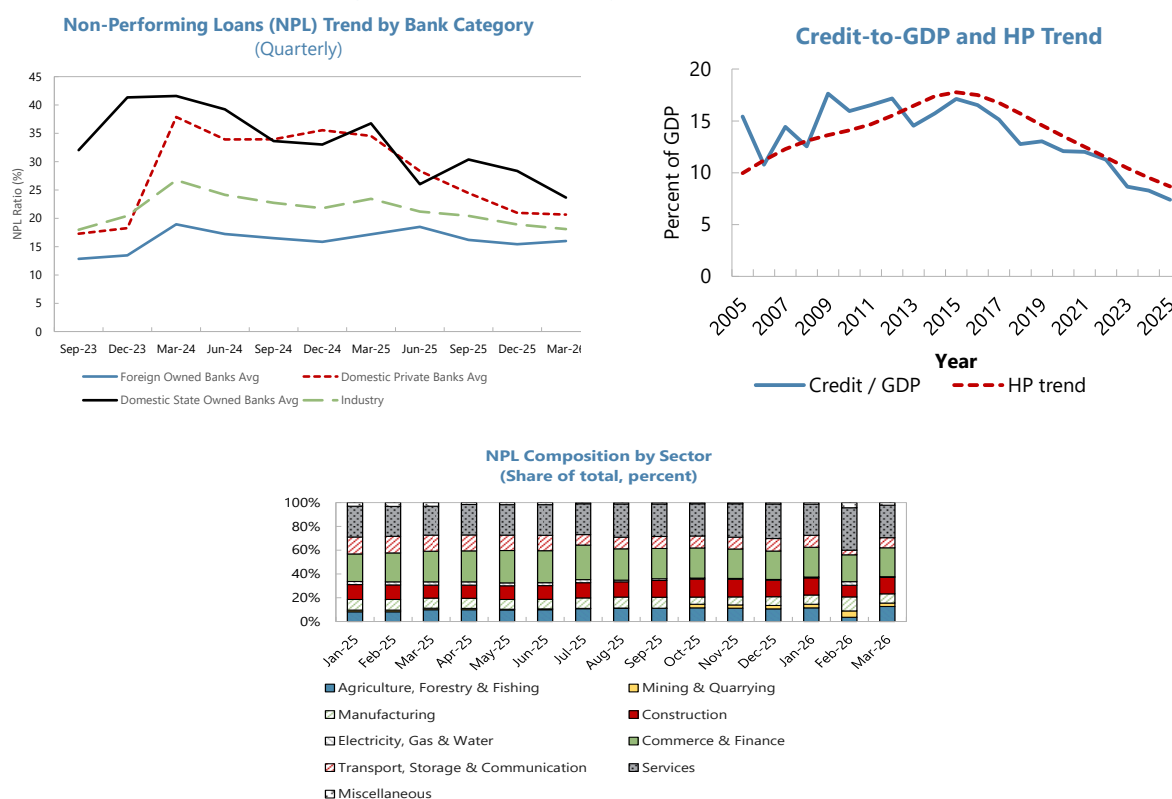
11. Credit to the private sector remained weak in 2025 despite stronger bank balance sheets. Private sector credit by banks was estimated at only 7.4 percent of GDP at end-2025, with the credit-to-GDP gap remaining negative (Figure 1). Elevated NPLs, tight internal lending

³ Measured by regulatory capital to risk-weighted assets.

standards—particularly among foreign-owned banks—and continued preference for sovereign exposure kept lending to the private sector subdued.

12. Asset quality remains a key structural constraint despite recent improvement. The industry's NPL ratio peaked at 26.7 percent in March 2024 and, although it has declined since then to 18.1 percent (March 2026), remains elevated relative to medium-term objectives (Figure 1). Risks are unevenly distributed across different types of banks (Figure 1), with SDIs also facing rising NPL pressures and profitability concerns, underscoring the need for continued supervisory vigilance.

Figure 1. Asset Quality and Credit to GDP



Source: BoG and IMF staff calculations

Note: Credit to GDP (in percent) is from World Bank data on domestic credit by banks to the private sector. Credit to GDP for years 2024 and 2025 are estimates.

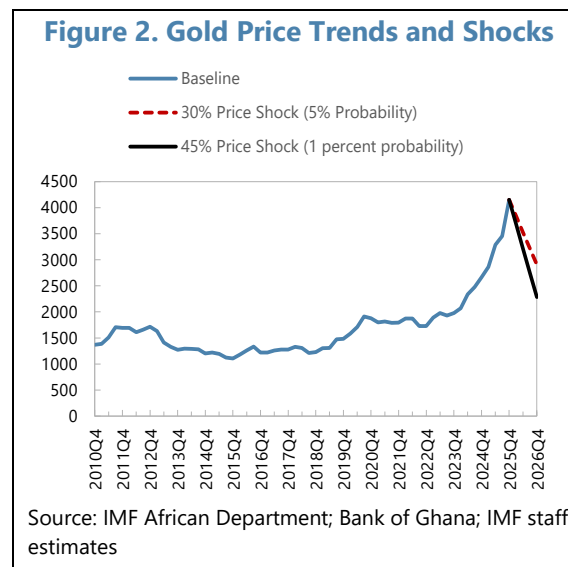
13. Overall, post-DDEP balance-sheet repair has improved system-wide resilience, but important vulnerabilities remain. Against this backdrop, the next section examines how a gold price shock would propagate through Ghana's macro-financial linkages and banks' balance sheets.

D. A Severe Gold Price Shock: Scenario Design and Transmission

14. Gold is a macro-critical source of risk for Ghana, with wide-ranging macro-financial spillovers. Gold exports account for over half of export receipts (and over two thirds of goods

exports), close to 10 percent of GDP, and about 21 percent of direct tax revenues, exposing the economy to adverse international price movements.

15. The stress tests are anchored on a moderate or a severe and persistent gold price shock. The first scenario assumes a 30 percent decline from USD 4,151/oz at end-2025 to USD 2,906/oz by end-December 2026—modeled as an exogenous terms-of-trade shock. The second scenario assumes a 45 percent decline to USD 2,283/oz. These calibrations are consistent with IMF stress-scenario practice for gold-exporting economies and represent extreme but plausible tail events broadly comparable to the 2012–15 gold price correction (Figure 2).



16. The shock is transmitted through nine macro-financial channels using Ghana-specific elasticities. A 30 percent decline in gold prices reduces foreign exchange inflows, leading to a nominal exchange rate depreciation⁴ of about 1.70–2.45 percentage points (implies that the exchange rate at end-December 2025 could depreciate by 23.4% ($2.45/10.45-1$) and an increase in CPI inflation of roughly 0.83–1.57 percentage points. In response to this, the BoG tightens monetary policy moderately, while sovereign risk intensifies, with Eurobond yields widening by about 150–200 basis points. Tighter financial conditions and weaker activity raise mining-sector NPLs, as discussed in the next section, while lower profitability in the gold sector reduces overall real GDP growth (Table 3). Macro-financial paths for inflation, the policy rate, NPLs, and aggregate demand are generated using the BoG’s restricted VaR (vector autogression) approach, with quarterly deviations from baseline reported in Figure 3. While Table 3 includes eight channels, the ninth channel—capturing the impact of the different gold price scenarios on banking indicators—is developed in the next section.

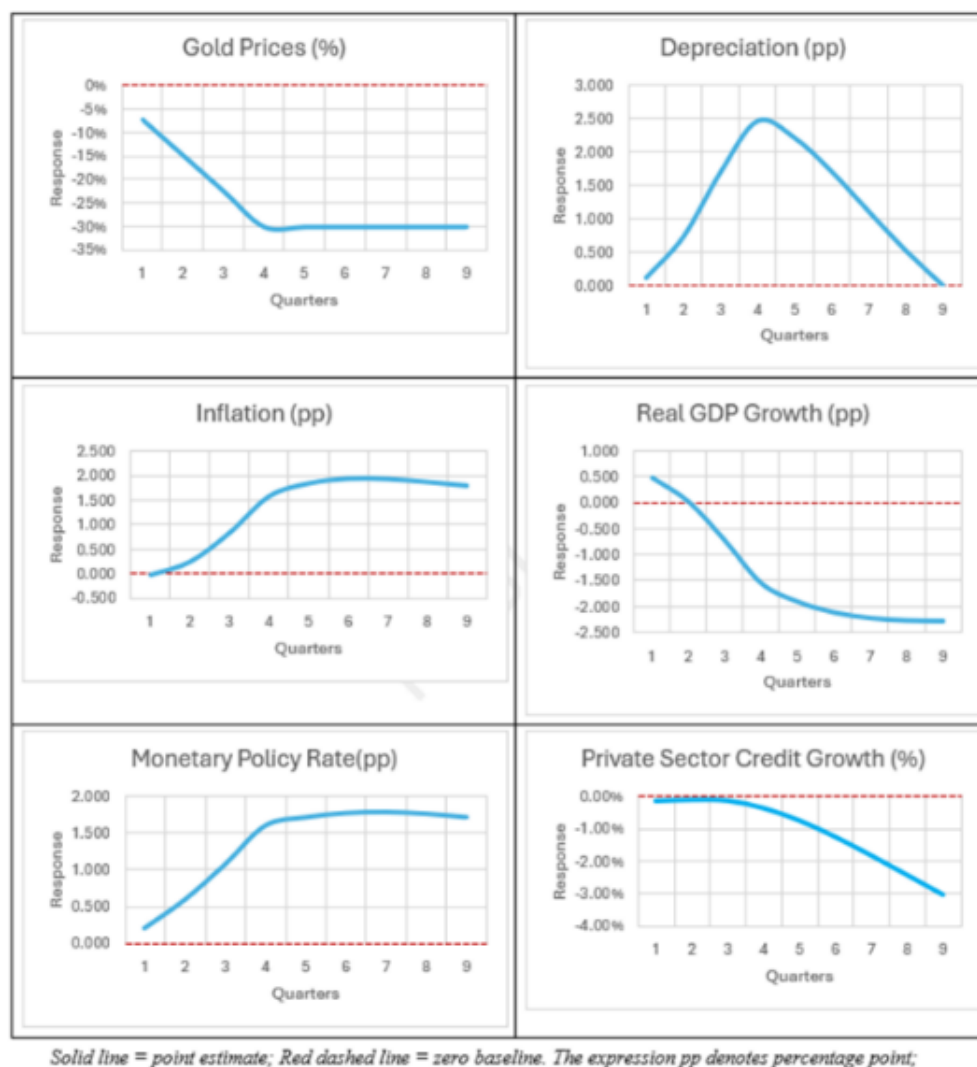
⁴ The exchange rate estimates are empirical impulse responses from a VAR model and are therefore specific to the historical relationships and horizons captured in the sample. They should also be interpreted considering Ghana’s diversified commodity export base—gold, oil, and cocoa—which has historically helped cushion adverse price movements in any single export commodity. Moreover, based on information available as of end-December 2025, Ghana’s current account surplus stood at US\$9.4 billion (8.2 percent of GDP), suggesting substantial external buffers against a gold price shock, all else equal. While the estimated exchange-rate responses may appear modest in percentage-point terms, their implied percent changes relative to the end-December 2025 exchange rate level (GHS 10.45 per U.S. dollar) are economically significant. A 15% shock, which could increase the exchange rate by 1.23 percentage points, implies that the exchange rate at end-December 2025 could depreciate by 11.8% ($1.23/10.45 - 1$). A 45% shock increasing the exchange rate by 3.7 percentage points implies that the exchange rate could depreciate by 35.4% ($3.7/10.45-1$).

Table 3. Ghana: Gold Price Shock and Macro-Financial Transmission Channels

Channel	Variable	Elasticity	IMPACT			Lag
			15 percent	30 percent	45 percent	
1. Gold Exports	Merchandise exports & FX inflows	1.0 (unit-elastic)	-15%	-30%	-45%	Immediate
2. Fiscal Revenues	Royalties & mining CIT	0.65-1.0	-0.50%	-0.8-1.0% GDP	-1.5% GDP	9-12 months
3. Exchange Rate	GHS/USD spot rate	$\epsilon = -0.25$ to -0.37	+0.85 to 1.23pp	+1.70 to 2.45 pp	+2.55 to 3.70pp	9-12 months
4. Inflation (CPI)	Import & energy pass-through	ERPT = 0.12 to 0.23 pp	+0.42 to 0.79pp	+0.83 to 1.57 pp	+1.25 to 2.36pp	9-12 months
5. Monetary Policy	Policy Rate	16 to 24 bps	+0.54 to 0.80 pp;	+107 to 161pp	+161 to 241pp	9-12 months
6. Financial Conditions	Credit to Private Sector	-0.02% to -0.05%	-0.18% to -0.37%	-0.35% to -0.74%	-0.53% to -1.10%	12-15 months
7. Sovereign Risk	CDS spreads; Eurobond yields	Correlated with fiscal gap widening	n/a	+150-200bps CDS	n/a	1-6 months
8. Real GDP Growth	Direct effect of gold sector in Real GDP Growth	-0.11 to -0.23 pp	-0.37 to -0.78pp	-0.73 to -1.55pp	-1.10 to -2.33pp	9-12 months

Source: IMF African Department; Bank of Ghana; IMF staff estimates.

Figure 3. Macro-Financial Transmission Paths: –30% Gold Price Shock
(Deviation from Baseline)



Variable	Q0	Q1	Q2	Q3	Q4	Q5	Q6
Gold price (% deviation)	0	-7.5%	-15.0%	-22.5%	-30%	-30%	-30%
Depreciation: GHS/USD (pp above baseline)	0	0.13	0.74	1.7	2.45	2.21	1.71
CPI inflation (pp above the baseline)	0	-0.025	0.24	0.83	1.57	1.83	1.93
Real GDP (pp above baseline)	0	0.48	0.02	-0.73	-1.55	-1.9	-2.11
Policy rate (bps above baseline)	0	20	59	107	161	172	178
Private Sector Credit (% Deviation)	0	-0.12%	-0.09%	-0.12%	-0.35%	-0.74%	-1.24%

Source: IMF African Department; Bank of Ghana; IMF staff estimates.

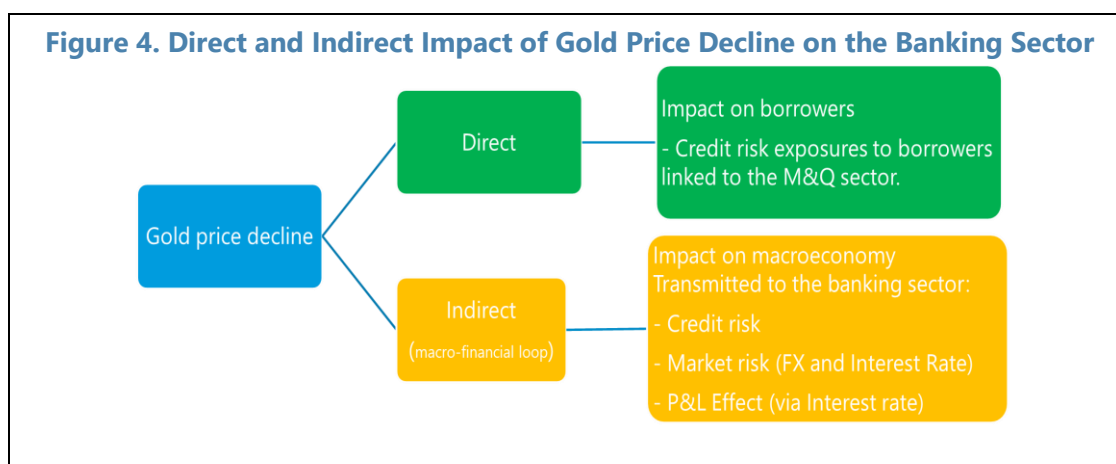
E. Banking-Sector Stress Testing Results

17. The banking-sector stress test assesses systemic resilience under moderate and severe gold price scenarios. The exercise covers 23 banks accounting for about 67 percent of financial

sector assets and applies macro-financial paths generated using the BoG's stress-testing infrastructure.

18. Direct exposure of banks to the mining and quarrying sector is limited. As of December 2025, loans to the mining sector accounted for only about 5.3 percent of the total loan portfolio, 2.88 percent of industry NPLs, with an NPL ratio (10.4 percent)—well below the industry average (18.1 percent), reflecting the reliance of mining firms on intragroup external financing rather than domestic bank credit.

19. The exercise is structured along the direct and indirect transmission channels illustrated in Figure 4. The direct impact of a gold price decline is assessed through credit risk exposures to borrowers linked to the mining sector. The indirect impact is transmitted through the macroeconomic path (Figure 3) and affects banks through credit risk, market risk (foreign exchange, sovereign, and interest rate), and net interest income channels (Figure 4). Key assumptions and results of the banking-sector stress testing are presented in Table 4.



20. Direct credit risk from a gold price shock appears limited; the main transmission to banks runs through broader macro-financial channels. Even under severe assumptions about defaults in the mining sector, the impact on aggregate capital adequacy and NPLs remains modest. Instead, the shock affects banks primarily through weaker macroeconomic conditions—raising NPLs, triggering exchange-rate revaluation effects, generating valuation losses on government securities, and altering net interest income under tighter monetary conditions. Even so, the banking system remains broadly resilient at the aggregate level under both scenarios, with system-wide capital adequacy ratios staying comfortably above the 13-percent regulatory minimum and the increase in NPLs remaining moderate relative to the baseline.

21. Under the adverse scenario, higher net interest income partially offsets other adverse effects, and aggregate capital ratios do not deteriorate further than under the moderate scenario. This reflects the assumption that monetary policy tightening raises interest income on banks' large holdings of central bank and government instruments. The result should be interpreted

with caution: it is sensitive to the degree of interest-rate pass-through assumed and does not fully capture offsetting funding-cost increases, mark-to-market losses on fixed-rate government securities, or second-round effects on credit quality under tighter financial conditions. It therefore reflects the mechanics of the stress framework rather than evidence of greater resilience to more severe shocks, and does not diminish the distributional risks discussed below (Table 4).

22. The banking system appears broadly resilient to gold price shocks at the aggregate level, but this masks important heterogeneity across bank groups and institutions. Direct exposures are concentrated in foreign banks, where mining and quarrying loans account for 6.6 percent of gross loans, compared with 2.4–2.6 percent for domestic banks. These banks nevertheless enter the shock with the strongest capital position, with a capital adequacy ratio of 20.1 percent as of December 2025, and absorb the direct impact comfortably. Domestic private banks have limited gold exposure, but their capital adequacy ratio stands at 5.7 percent—already below the 13 percent regulatory minimum—making them the most vulnerable to any broader weakening in asset quality. Domestic state banks remain adequately capitalized and have modest exposures in aggregate, although concentration risk is material: default of the largest gold-related obligor would leave one state bank about 0.6 percentage point below the regulatory minimum. As a result, the industry-wide capital adequacy ratio, at about 17.5 percent and broadly unchanged across scenarios, understates the underlying dispersion. Resilience is therefore uneven across institutions, and weaker banks could still face material capital erosion. Reporting both aggregate and disaggregated results is important, as system-wide resilience does not imply uniform resilience across institutions and supervisory attention should remain focused on vulnerable banks rather than on system averages alone.

Table 4. Ghana: Banking-Sector Stress Test, Key Assumptions and Industry Results					
Module	Assumptions	Impact	Baseline Scenario Outcome	Moderate Scenario Outcome	Adverse Scenario Outcome
Direct Impact: Credit Risk					
Borrower Default Risk Analysis	Increase in migration of performing loans to non-performing loans (in the M&Q sector); +6.1 and +15.2 increase in default rate from baseline	NPL CAR	18.9 17.5	19.9 17.0	20.2 16.8
Largest Borrower Risk Analysis	Default of single largest gold-related borrower; 66.7% and 100% default from baseline; no collateral relief except for cash and near cash items	NPL CAR	18.9 17.5	20.0 17.1	21.1 16.7
Indirect Impact: Credit Risk					
Macro Shock Analysis	Satellite model, VAR; macroeconomic path of 30% and 45% gold price decline	NPL	18.4	19.2	19.6
	Quasi-static; incorporate NPL path, FX effect & interest rate effect on balance sheet and P&L	CAR	17.7	17.2	17.9*
Note: Net interest income offset net impact from NPL increase, FX effects and revaluation of government bonds. Source: Bank of Ghana Financial Stability Department; IMF staff calculations.					

F. Central Bank Balance-Sheet Stress Testing

23. The central bank stress test applies the same adverse macro-financial paths to the central bank balance sheet. Three scenarios are considered: a baseline, a moderate scenario anchored on a 30 percent decline in gold prices from end-2025 levels, and a severe scenario with a 45 percent decline in gold prices. Across scenarios, elasticities and transmission mechanisms are held constant, with differences in outcomes reflecting only the severity of the macro-financial shock. Scenario assumptions and parameters are summarized in Table 4 and Figures 2 and 3.

24. The central bank balance sheet stress test employs a stylized equity model based on the IMF MCM Central Operations framework.⁵ The model decomposes the BoG's balance sheet into net foreign assets (NFA), net domestic assets (NDA), and reserve money (RM), with shareholders' equity (SE) derived as a residual (Table 5):⁶

Table 5. Ghana: Baseline Balance Sheet with Initial Interest Rates

Unaudited Stylized balance sheet at time = 0

Definition	Variable	Amount	Definition	Variable	Amount
Net Foreign Assets	B_f_0	100,791.17	CIC+ Required Reserves (Non-Interest Bearing)	C_0	154,116.46
Net Domestic Assets	B_d_0	53,966.98	Excess Reserves (interest-bearing liabilities)	R_0	99,163.05
			Equity	E_0	-98,521.36
			without gold		-95,723.59
			Nominal GDP	NGDP	1,434,180.00

Assigned Interest Rates Quarterly

Definition	Variable	Value	Definition	Variable	Value
NFA Yield	y_f	0.7%	Nominal GDP growth	g_n	3.3%
FX depreciation rate	g_fx	1.8%	Domestic policy rate after spread (=interest rate assigned)	i_d	3.0%
NFA yield in domestic currency	r_fx	2.5%			
NDA Yield	y_d	4.0%			

Notes: Operational Cost (Non-OMO) 2,797.77

Source: Bank of Ghana, IMF staff calculations.

Note: NFA + NDA (excluding SE and OMO) – Excess Reserves (OMO) – Currency in Circulation (CIC) – Required Reserves = SE

25. Baseline projections show equity improving toward positive territory over a five-year period, assuming favorable economic conditions and a gold share of reserves of 20 percent. The improvement is largely driven by reductions in OMO expenses as monetary policy normalizes and inflation dissipates. Under the baseline, equity as a share of GDP improves steadily from approximately -6.9 percent of GDP to around -0.35 percent of GDP over a 20-quarter horizon. Equity trends with and without doré gold operations and other operational costs show a broadly similar trajectory, with the baseline excluding gold operations showing marginally better equity outcomes throughout the projection period.

26. The primary channels through which gold price shocks affect the BoG's balance sheet include: (i) revaluation of gold holdings within NFA; (ii) exchange rate pass-through effects on foreign currency-denominated assets and liabilities; and (iii) higher OMO costs resulting from

⁵ The stylized model has been designed by Yuji Sakurai from the IMF Monetary and Capital Market Central Bank Operations.

⁶ OMO refers to Open Market Operations.

monetary policy tightening in response to inflationary pressures. Notably, NFA yields are unchanged as gold has zero yields. Direct and indirect effects are shown in Tables 6 and 7.

Table 6. Ghana: Direct Effect

	Gold Price (USD/Oz)	Stock of Gold Assets (GHS)	NFA (GHS)
Baseline	4,151	27,150	100,791
30% Price Shock	2,906	19,005	92,646
45% Price Shock	2,283	14,933	88,574

Source: Bank of Ghana, IMF staff estimates.

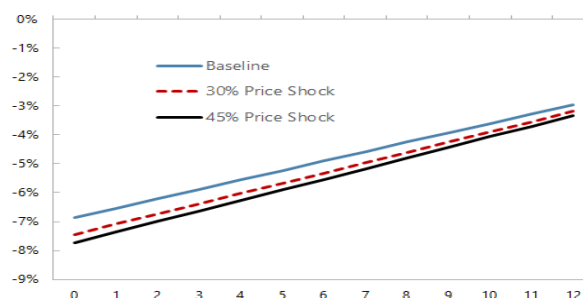
**Table 7. Ghana: Indirect Effect (Macro) VAR Estimates
(Percent)**

	Depreciation	Nominal GDP Growth Rate	Domestic Policy Rate
Baseline	7.0	13.0	12.0
30% Price Shock	9.5	13.5	13.6
45% Price Shock	10.7	13.7	14.4

Source: Bank of Ghana, IMF staff estimates.

27. Equity is lower under a 30 percent gold price shock over the five-year horizon. The equity-to-GDP gap relative to baseline ranges from approximately 0.57 percentage points of GDP in the first quarter to 0.47 percentage points of GDP over subsequent quarters. This impact dissipates over the forecast horizon as some economic effects—such as higher nominal GDP growth and exchange rate depreciation—become favorable to the central bank balance sheet (Figure 5).

**Figure 5. Equity Trends Across Shocks
(In percent of GDP)**



Source: Bank of Ghana; IMF staff estimates.

28. Across various shock magnitudes, larger gold price declines produce correspondingly wider equity gaps, though the basic pattern of gradual convergence toward the baseline trajectory is preserved across all scenarios. The equity impact from gold price shocks could be sizable in the near term but dissipates over the forecast horizon (Figure 5).

29. A higher gold share in reserves materially increases the BoG's exposure to a gold price correction. Baseline equity remains unchanged at -6.9 percent of GDP across reserve compositions, since reallocating reserves between gold and other assets does not affect the initial capital position. The sensitivity analysis shows that once a shock materializes, however, losses on gold holdings pass directly through to equity and rise with gold exposure. Under a 30 percent price decline, equity falls to -7.4 percent of GDP when gold accounts for 20 percent of reserves, compared with -8.3 percent

when gold accounts for 50 percent of gross international reserves; under a 45 percent decline in gold prices, equity weakens further to –9.0 percent of GDP (Table 8). The results underscore that a more gold-heavy reserve portfolio materially amplifies concentration risk and the balance-sheet impact of an adverse gold price shock.

30. A higher gold share also lengthens the time the balance sheet operates with negative equity. Absent a shock the effect is small—solvency is restored around the twenty-second quarter at a 20 percent gold share and the twenty-third at 50 percent—as a gold-heavy portfolio earns a lower return and rebuilds equity more slowly. Under stress the effect compounds, since a larger gold position both deepens the initial loss and slows the recovery: under a 30 percent price shock the return to positive equity shifts from the twenty-third to the twenty-seventh quarter as the gold share rises from 20 to 50 percent, a delay of about one year. Reserve concentration in gold is thus costly both in the depth of the equity shortfall and in the time required to reverse it.

Table 8. Ghana: Sensitivity Analysis, Equity by Gold Share of Total Gross International Reserves
(In percent of GDP)

Gold share (as a percent of total Gross International Reserves)	Baseline	30% price shock	45% price shock
20%	-6.9	-7.4	-7.7
30%	-6.9	-7.7	-8.2
40%	-6.9	-8.0	-8.6
50%	-6.9	-8.3	-9.0

Source: IMF staff calculations

31. These results highlight BoG's exposure to commodity price volatility. Although equity remains on an improving trajectory over the medium term, a higher gold share in reserves and near-term gold price shocks could complicate recapitalization efforts, underscoring the importance of incorporating commodity risk into balance-sheet planning.

G. Policy Implications

32. Overall, gold price shocks generate manageable risks at the aggregate level, but important tail risks remain.

- **For the banking sector, maintaining strong capital buffers and addressing residual institutional weaknesses are critical.** While post-DDEP buffers support system-wide resilience, timely recapitalization, strengthened supervisory enforcement, and resolution of remaining weak banks are essential to mitigate tail risks and safeguard confidence.
- **For the central bank, building resilience to commodity price volatility should be a priority.** Recapitalization strategies should explicitly incorporate commodity-risk buffers, while continued monetary policy normalization would reduce OMO costs and strengthen baseline equity dynamics.

33. Taken together, the findings underscore the importance of proactive macro-financial risk management in a commodity-dependent economy. Completing financial sector reforms under the GFSSS and strengthening crisis preparedness will remain central to sustaining financial stability.

H. Methodological Limitations

34. Stress-test results should be interpreted considering several limitations. The exercises are conducted under quasi-static balance-sheet assumptions and do not capture second-round feedback effects. Central-bank stress-test scenarios are deterministic and should not be interpreted as forecasts.

35. Notwithstanding these limitations, the framework provides a transparent and internally consistent assessment of macro-financial resilience. It offers a useful basis for policy discussion and risk monitoring in the context of Ghana's commodity exposure.

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GHANA'S ENERGY SECTOR: FROM FISCAL VULNERABILITY TO A PLATFORM FOR SUSTAINED GROWTH¹

A. Introduction

1. Ghana's [Medium-term National Development Policy Framework](#) places reliable and affordable electricity at the center of industrialization, digitalization, job creation, and inclusive growth. Initiatives such as the authorities' [24-Hour Economy Strategy](#)² and [Ghana's National Energy Compact](#) (GNEC)³ underscore the centrality of the power sector in supporting manufacturing, agro-processing, and services activity. Empirical evidence shows that firms in these sectors are highly vulnerable to power outages which impose direct costs through lost output, equipment damage, and reliance on expensive backup generation.^{4,5} Achieving these objectives will require a step change in the reliability, affordability, and financial sustainability of electricity supply.

2. **However, the energy sector has not consistently played this enabling role.** Instead, it has been a persistent source of fiscal pressure and macroeconomic vulnerability. The sector continues to generate sizable financial shortfalls, estimated at about 1–1½ percent of GDP in recent years, and has accumulated significant arrears to independent power producers (IPPs) and fuel suppliers (FS). These imbalances have required recurrent government intervention through budget transfers and arrears clearance, crowding out priority spending and weakening fiscal buffers. At the same time, unreliable electricity supply, closely linked to the sector's financial condition, continues to impose direct costs on firms, undermine competitiveness, and deter private investment.

3. **These outcomes mainly reflect the structural features of the sector and gaps in the consistent implementation of the regulatory framework.** Ghana's electricity system is

¹ Prepared by Valerio Crispolti (AFR).

² The strategy targets expanded manufacturing, agro-processing, and services activity around the clock, identifies reliable and affordable electricity as a core infrastructure requirement for sustained and inclusive growth.

³ The GNEC was adopted in 2025 under the joint World Bank (WB) and African Development Bank (AfDB) [Mission 300 Framework](#). Its main objectives to transform the energy sector in a platform for growth are: (i) a total energy sector investment of US\$4.4 billion over 2025–2030, of which US\$2.6 billion is expected from private sources; (ii) a 99 percent electricity access rate by 2030 (89 percent in 2024); and (iii) an increase in the share of renewables in installed generation capacity from approximately 4 percent to 10 percent. These targets are aligned with the [UN Sustainable Development Goal 7](#), [the Paris Agreement](#), and [the African Union's Agenda 2063](#).

⁴ According to the [World Bank Enterprise Survey](#), which measures the incidence of outages affecting firms, approximately 95 percent of Ghanaian manufacturing firms report power outages that affect their productivity.

⁵ The economic cost of backup generation is modelled in the World Bank, [Ghana Energy Sector Recovery Program, Program Appraisal Document \(PAD\), Report No. PAD4401](#) (PforR), June 2024, which estimates willingness-to-pay for reliable grid electricity at US\$0.15/kWh compared to an average cost of production of US\$0.10/kWh (paragraph 16). The US\$0.05/kWh differential represents the implicit cost of reliability that consumers absorb through backup coping mechanisms.

characterized by significant state ownership across the value chain, limited financial ringfencing between entities, and contractual arrangements, particularly in power generation, that create fixed payment obligations largely independent of realized demand or collections. In this setting, operational and financial shortfalls originating at the distribution level propagate rapidly upstream and ultimately to the government balance sheet. These structural vulnerabilities are compounded by recurrent deviations from the regulatory framework, particularly in tariff adjustments and payment discipline, which have repeatedly converted temporary cost pressures into persistent fiscal liabilities.

4. The authorities' reform efforts under the Extended Credit Facility (ECF)-supported program have begun to address these challenges. Progress in 2025—including the resumption of tariff adjustments, strengthened implementation of the Cash Waterfall Mechanism (CWM),⁶ and steps toward arrears reduction—has helped stabilize the sector's financial position. Nonetheless, key vulnerabilities remain, and sustained reform efforts are essential to durably restore financial viability and reposition the energy sector as a platform for growth.

5. This paper examines how Ghana's energy sector can transition from a source of fiscal risks to a durable enabler of sustained and inclusive growth. Section B provides a brief overview of how the electricity sector operates in practice, including the structure of the value chain, the role of key public entities, and the main financial flows. Section C identifies the structural features and cost dynamics that generate fiscal risks and explains the transmission channels through which financial stress propagates to the government balance sheet. Section D examines the sector's financial position and associated macroeconomic costs. Section E assesses progress under the ECF-supported reform program. Finally, Section F outlines the policy priorities to restore financial sustainability and support private investment and improved service delivery.

B. How Ghana's Electricity Sector Works

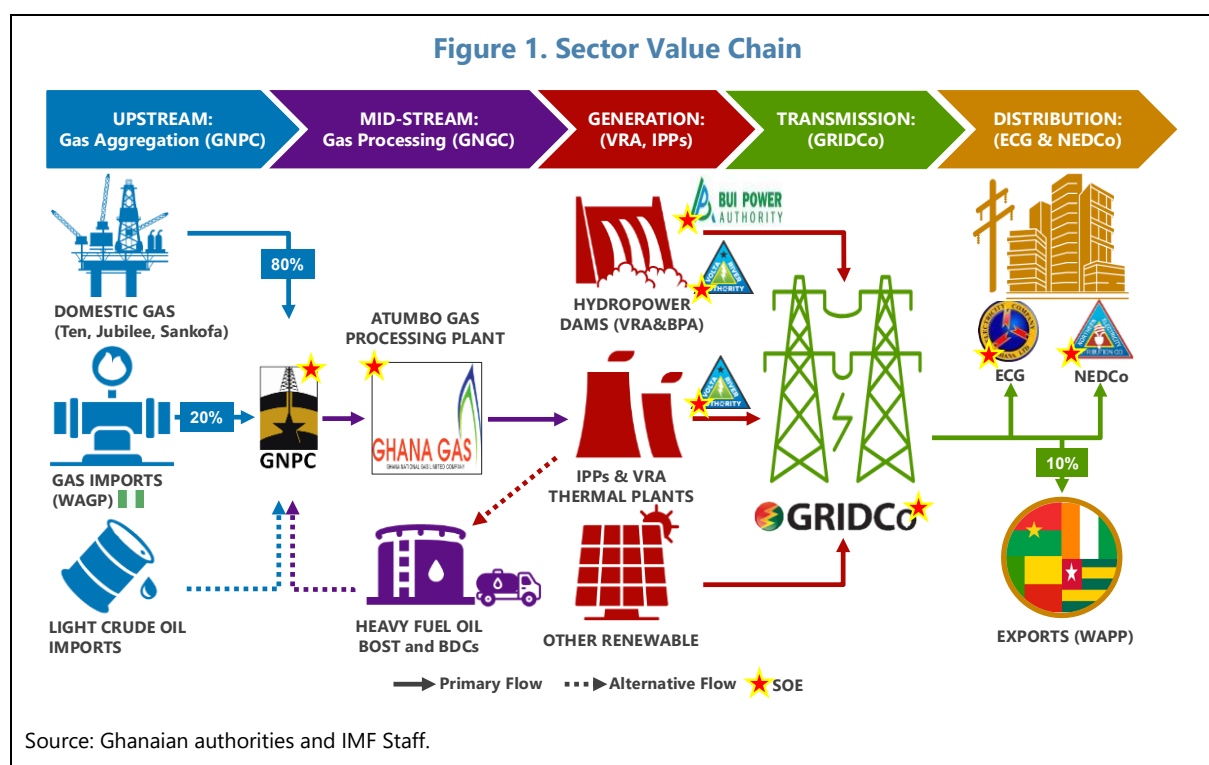
Sector Structure and Value Chain

6. Electricity is generated from two distinct sources with different availability. Thermal generators, fueled primarily by natural gas (liquid fuels are used as backup, when gas supply is constrained), convert fuel combustion into electricity. Hydropower plants generate electricity from flowing water and their output primarily depends on rainfall and reservoir levels. These two sources are not interchangeable: while thermal generation can be increased by securing more fuel, hydropower output is bounded by hydrology and cannot be expanded on demand. As a result, Ghana's electricity supply in any given period is determined by how much of its generation comes from each source.

7. Ghana's power sector value chain runs from upstream gas production to retail electricity supply (Figure 1). At the upstream stage, natural gas is produced from three offshore fields (TEN, Jubilee, and Sankofa) and supplemented by imports from Nigeria through the West

⁶ The CWM was introduced in 2020 to manage pre-existing payment discipline failures and substantially revised in 2023; it governs revenue distribution upstream but does not eliminate financing gaps.

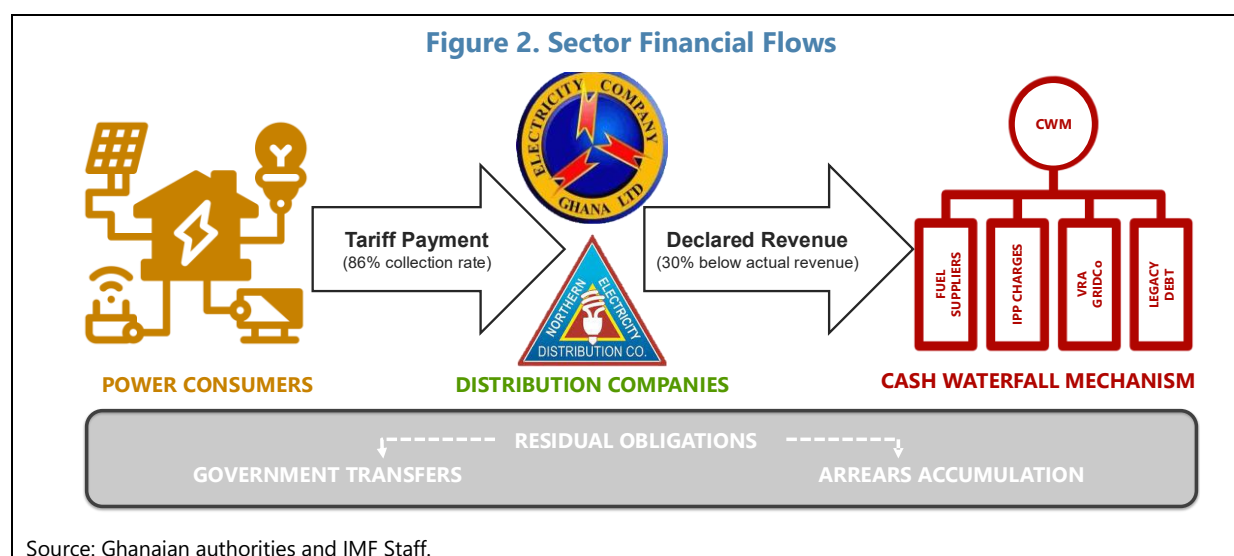
African Gas Pipeline (WAGP). At the midstream stage, raw gas is processed at the Atuabo plant and delivered to thermal generators concentrated in the Tema and Takoradi enclaves. When gas supply is constrained, thermal plants substitute to liquid fuels. Electricity is also generated from hydropower dams and other renewable sources. Generators supply power to the National Interconnected Transmission System operated by the Ghana Grid Company Limited (GRIDCo), from which the distribution utilities (Electricity Company of Ghana (ECG) in the southern and central zones; Northern Electricity Distribution Company (NEDCo) in the northern zone) deliver electricity to residential, commercial, industrial, and government customers under tariff schedules set by the Public Utilities Regulatory Commission (PURC). A portion of electricity is also exported to the regional partners.



8. Public entities are present at each stage of the value chain (Figure 1). The Ghana National Petroleum Corporation (GNPC) plays a central role in upstream gas aggregation, while the Ghana National Gas Corporation (GNGC) is responsible for gas processing and operates the domestic gas transport network. At the generation stage, the Volta River Authority (VRA) and the Bui Power Authority (BPA) operate state-owned plants, while Independent Power Producers (IPPs) account for a substantial share of installed capacity (about 44 percent) under long-term power purchase agreements (PPAs). GRIDCo operates the transmission network, while ECG and NEDCo are responsible for distribution and retail.

9. Financial flows in the electricity sector originate at the retail level and move upstream (Figure 2). Consumers pay electricity bills to ECG and NEDCo based on regulated tariffs, and these collections constitute the primary source of liquidity for the sector. Revenues are pooled and allocated through the CWM, a rules-based framework that distributes available resources across

sector participants according to a predefined priority sequence⁷, although in practice adherence to these rules has been inconsistent, with deviations including non-standard tier allocations. In practice, ECG's collection performance (approximately 88 percent of all electricity sold in the regulated market)⁸ is the central determinant of the sector's financial position.⁹ Because most upstream payments—including fuel procurement, IPP capacity charges, and transmission fees—ultimately depend on downstream collections, any shortfall at the distribution level immediately affects the entire system. While the CWM imposes a structured allocation of available revenues, it does not eliminate financing gaps when total collections are insufficient to cover costs. As a result, residual obligations either accumulate as arrears or require government intervention.



C. Why Ghana's Electricity Sector is a Source of Fiscal Risks

Government's Financial Exposures to the Sector and Transmission Channels

10. The government's financial exposure to the sector reflects structural factors. First, the government is exposed directly through its equity stake across the entire value chain as it owns or

⁷ The CWM operates through a single designated collection account with a fixed priority disbursement sequence whereby resources are first used to pay fuel costs first and then Level-A IPP capacity charges, VRA, GRIDCo transmission charges, and legacy debt service contributions. The CWM compliance is monitored through two independent verification processes. The [ECG Revenue Validation Reports](#), conducted by independent auditors, verify ECG's actual collections against its declared collections to the CWM. The [CWM Validation Reports](#), published by PURC, track whether disbursements from the CWM account followed the prescribed priority sequence and whether recipients received their full allocations. The gap between validated and declared collections and that between CWM allocations and actual payments to recipients are the two principal indicators of CWM compliance.

⁸ At the retail level, residential, commercial, and industrial consumers pay electricity bills to ECG or NEDCo according to tariff schedules set by regulator. Bulk customers connected directly to the grid pay GRIDCo for transmission services. Exports to neighboring countries are billed under separate bilateral arrangements.

⁹ In 2024, ECG's declared revenues to the CWM were approximately GH¢5.1 billion below independently validated collections (GH¢10.4 billion declared against GH¢15.5 billion validated), a gap of roughly one-third of actual collections ([PwC, 2024](#)).

controls critical infrastructure¹⁰ and operates public entities at each stage of the value chain. Second, the limited financial ringfencing between entities implies that financial losses experienced by an entity at any stage of the value chain is not absorbed through insolvency, restructuring or service withdrawal, but instead it propagates through the value chain.¹¹ Third, long-term Power Purchase Agreements (PPAs) with IPPs embed fixed payment obligations at the generation stage (i.e., capacity charges, take-or-pay provisions), implying that the sector's cost base does not adjust downward when demand weakens or collections fall short.¹² Taken together, these factors imply that financial stress cannot be contained within individual entities and shape how financial stress is transmitted through the value chain and ultimately to the public sector.

11. The sector's cost structure further amplifies fiscal vulnerabilities (Figure 3). Ghana's generation costs are largely insulated from global gas price volatility as most gas is domestically produced under administered or commercial contracts but highly sensitive to movements in international oil prices and the exchange rate. Under current pricing arrangements, none of Ghana's natural gas sources used for thermal generation are priced with reference to international gas hub benchmarks.¹³ As a result, the weighted average cost of gas (WACOG), a key component of generation costs, is largely unresponsive to fluctuations in global gas prices. By contrast, Brent crude oil price movements affect generation costs through two distinct channels. First, certain gas supply contracts are indexed to oil or commodity prices, particularly Sankofa and imports through the West African Gas Pipeline (WAGP)¹⁴, affecting the WACOG with a lag. Second, when domestic gas supply is insufficient or unavailable due to a policy choice, thermal generators switch to liquid fuels, the

¹⁰ Upstream, GNPC holds equity in all three producing offshore fields alongside international oil company (IOCs) partners and serves as the national gas aggregator, purchasing and on-selling domestic gas to thermal generators. The Ghana GNGC operates the Atuabo gas processing plant and domestic gas transport network. At the generation stage, VRA and BPA hold a significant share of installed generation capacity. In transmission, GRIDCo owns and operates the national transmission system. Distribution and retail are served by ECG and NEDCo covering central-southern and northern Ghana, respectively.

¹¹ For example, ECG does not operate under a commercially binding insolvency framework, and upstream entities, such as GRIDCo, VRA, and GNGC, cannot credibly suspend supply without causing widespread service disruption. Consequently, the ability of these entities to enforce payment discipline through service withdrawal is limited and financial losses originating at the distribution level are not absorbed at the firm level and propagate through the value chain.

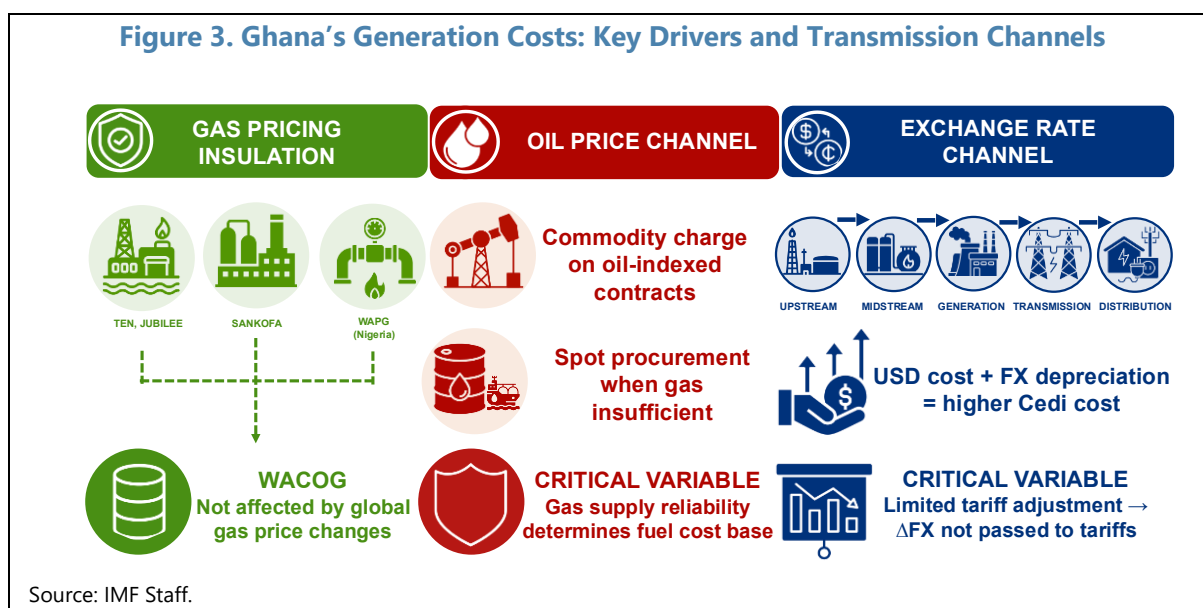
¹² When ECG's revenues are insufficient, these obligations continue to accrue in full, generating arrears that must ultimately be resolved either through government transfers or renegotiation.

¹³ Jubilee and TEN associated gas is sold at an administered price of approximately US\$2.90/MMBtu under the terms of the respective Plans of Development; supply volume is tied to oil production rates rather than to gas demand, making it an unreliable sole source. Sankofa non-associated gas, produced under the OCTP joint venture, is nominally contracted at approximately US\$8.72/MMBtu (the estimated net cost of Sankofa gas to Ghana is less than US\$4.5/MMBtu after accounting for GNPC's participating interest, royalties, and taxes) indexed to Brent crude, and provides a more stable dedicated gas supply. The price reflects the OCTP commercial contract. Brent-indexation means the cedi cost of Sankofa gas moves with both international oil prices and the GHS/USD exchange rate. Nigerian gas, imported through the West African Gas Pipeline (WAGP), is contracted at approximately US\$8.75/MMBtu and represents an intermittent source of gas as it has operated under force majeure since 2011.

¹⁴ The original 2015 Sankofa Gas Sales Agreement was indexed to Henry Hub plus the US consumer price index at a headline price of US\$9.8/MMBtu; following renegotiation in 2019, the price was reduced.

most expensive generation option in the system, typically procured on an emergency basis at spot prices. This channel bypasses the WACOG mechanism entirely and transmits oil price changes immediately into generation costs. Movements in the GHS/USD exchange rate represent the most pervasive and fastest-acting source of cost pressure across the entire value chain because sector costs—including fuel procurement, IPP capacity charges, and debt service—are generally denominated in U.S. dollars while ECG revenues are denominated in cedis.

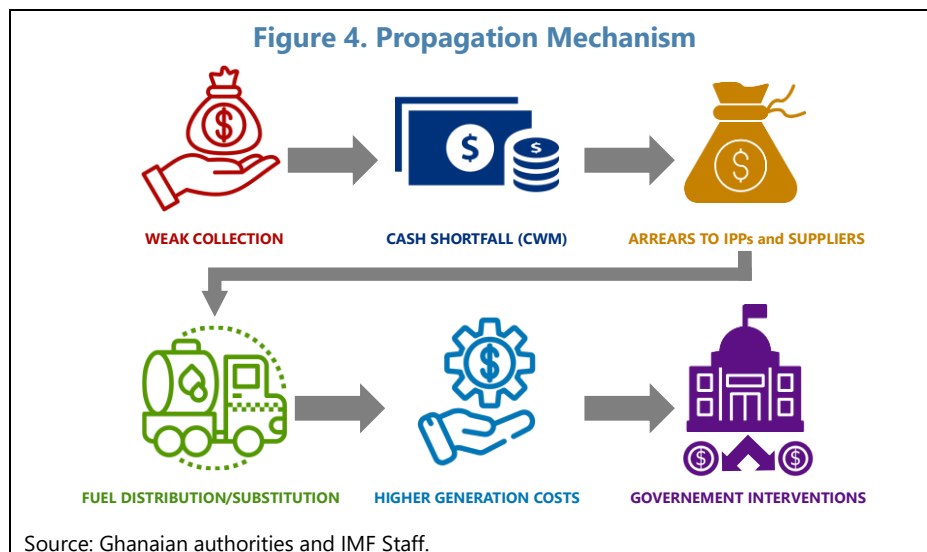
12. Sector's financial imbalances propagate to the government's balance sheet through a well-defined transmission mechanism (Figure 4). This process consists of a sequence of interconnected steps. First, weaknesses in distribution performance—reflected in technical and commercial losses, incomplete bill collection, and underreporting of collections to the CWM—



reduce the cash available to ECG. As the primary point of revenue collection in the system, shortfalls at this stage immediately constrain the sector's liquidity. Second, reduced collections lead to shortfalls in allocations to suppliers through the CWM, which is not designed to eliminate financing gaps when total revenues are insufficient to cover generation costs. Third, unpaid obligations accumulate as arrears to upstream entities, including IPPs, gas suppliers, and FS. These arrears reflect the gap between contractual payment obligations and available resources. Fourth, the accumulation of arrears affects operational conditions, particularly fuel supply. Delayed payments to gas suppliers can constrain gas deliveries, increasing—or prompting a policy shift toward—liquid fuel generation at high international prices.¹⁵ This substitution raises generation costs and further widens the financial gap. Fifth, the resulting financing shortfall is ultimately absorbed by the government, either through direct budget transfers or through the accumulation of public liabilities.

¹⁵ At its peak, the Eni/OCTP letter of credit, backed by a World Bank guarantee (US\$500 million), accounted for a substantial share of total sector payables.

In the absence of effective containment mechanisms, financial stress originating within the sector is therefore transmitted to the public balance sheet even in the absence of explicit guarantees.¹⁶



13. Two additional factors amplify the propagation of financial stress to the government balance sheet. First, GNPC's simultaneous roles as equity holder in producing fields and as national gas aggregator create structural tensions that affect both upstream cost recovery and downstream supply reliability. As an equity partner alongside IOC operators, GNPC receives a share of production revenues from the Jubilee, TEN, and Sankofa fields. As gas aggregator, it purchases gas from these same fields—including from its IOC partners—at administered or commercial contract prices, and on-sells it to thermal generators. When ECG's payment shortfalls propagate upstream, gas suppliers including GNPC's IOC partners accumulate unpaid receivables against GNPC that ultimately require government settlement, compounding the exposure already described at the upstream stage. Second, late payments of electricity bills from Ministries, Departments, and Agencies (MDAs) have led to the accumulation of unpaid balances that reached approximately 16 percent of total sector outstanding payables at end-2025.

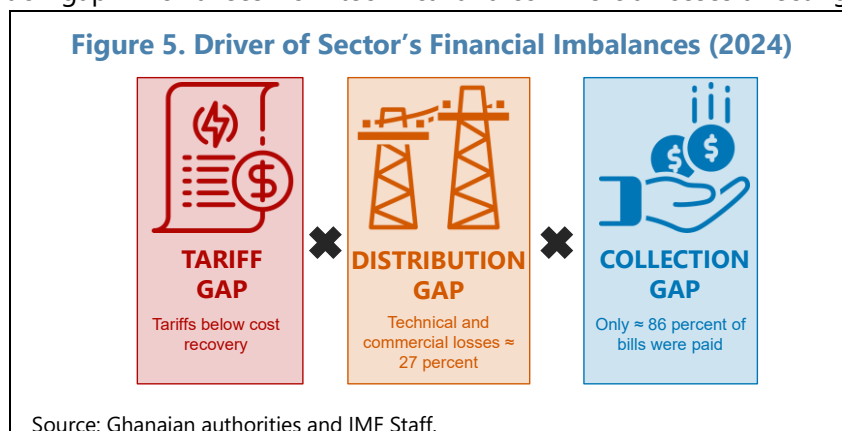
¹⁶ Upstream, GNPC's arrears against gas suppliers ultimately constitute sovereign obligations when GNPC's own cashflow is insufficient to settle them—an exposure arising not from a formal guarantee but from the absence of any credible alternative resolution mechanism. Midstream, GNGC is not subject to an insolvency framework, implying that any financing gap falls on the government by default. At the generation stage, the MoF intervenes directly whenever ECG and GRIDCo cannot meet PPAs obligations. At the transmission stage, GRIDCo cannot withhold transmission services from a non-paying distributor utility without causing a supply disruption, removing the commercial lever that would ordinarily discipline a non-paying counterparty. At the distribution stage, ECG has no credible insolvency framework and the political consequences of allowing distribution failure are prohibitive, constituting a *de facto* unconditional government guarantee.

Structural Drivers of the Sector's Financial Imbalances

14. The sector's financial imbalances originate from three interrelated structural gaps

(Figure 5). First, the tariff gap that reflects the difference between the cost of supplying electricity and the revenue implied by the approved tariff schedule.¹⁷ Although Ghana's regulatory framework provides for periodic tariff adjustments, implementation has been uneven, particularly around election cycles, resulting in prolonged deviations between tariffs and underlying costs.^{18,19} Quarterly structural benchmarks under the IMF-supported program have supported more regular adjustments since 2025. Second, the distribution gap which arises from technical and commercial losses affecting the amount of electricity that is billed to consumers.²⁰

These losses shrink the effective revenue base to which tariffs are applied, weakening the sector's ability to recover costs even when tariffs are adjusted. Third, the collection gap that reflects incomplete payment of billed electricity.²¹



15. These gaps reinforce each other with a multiplicative rather than additive effect. The tariff gap reduces revenue per unit of electricity sold, the distribution gap reduces the volume of billable energy, and the collection gap reduces the share of billed revenues that are actually received. Hence, if tariffs don't keep up with costs (i.e., positive tariff gap) and distributors lose a part of their power due to inefficiencies (i.e., positive distribution gap), the sector will experience an imbalance even when all customers pay their bills in full (i.e., no collection gap). Similarly, cost-

¹⁷ The tariff gap has a self-reinforcing dynamic: under-recovery accumulates as arrears to generators and gas suppliers, whose associated financing costs and penalty charges add to the cost base that future tariff adjustments must cover, making the path to cost recovery progressively more demanding with each period of under adjustment.

¹⁸ A further source of tariff under-recovery arises when tariff adjustments are formally made by PURC based on a lagged reference exchange rate, typically the average of the preceding quarter, and utilities procure fuel and service debt at the exchange rate prevailing at the time of payment. This source of tariff under-recovery becomes particularly significant during periods of rapid cedi depreciation.

¹⁹ A recent study from the public utility regulator ([PURC, March 2025](#)) found that Ghana's electricity tariffs sit near the African median. Within West Africa, Ghana's tariffs are moderate — higher than subsidized systems such as Nigeria, but lower than smaller systems with high operational inefficiencies such as Liberia and Sierra Leone. Compared to East Africa, Ghana's tariffs are relatively higher, primarily because of its thermal generation component and FX exposure. North African tariffs are the lowest on the continent due to large-scale subsidies.

²⁰ Technical losses arise from aging infrastructure, overloaded transformers, and inadequately maintained low-voltage networks. Commercial losses arise from illegal connections, meter bypassing, billing errors, and insufficient metering coverage.

²¹ With a collection rate of approximately 86 percent in 2024, a significant fraction of electricity billed by ECG is not recovered, with non-payment by public sector entities accounting for a significant share of it.

reflective tariffs can still be associated with sector's financial imbalances if customers are not paying their bills (i.e., positive collection gap).

Box 1. Ghana's Regulatory and Tariff Frameworks

Ghana's energy sector operates within a comprehensive regulatory framework. The Ministry of Energy and Green Transition (MoE) is responsible for energy policy formulation, implementation, and supervision. The Energy Commission (EC) is the technical regulator responsible for licensing generation, transmission, and distribution activities and for administering competitive procurement of new generation capacity. The PURC is the economic regulator responsible for tariff determination, the monitoring of service standards, and promotion of fair [competition](#). The Petroleum Commission (PC) governs upstream oil and gas contracts, including the production sharing agreements under which GNPC holds equity alongside IOC partners. Together these bodies constitute a comprehensive regulatory architecture that establishes mandates, instruments, and legal basis for cost-reflective tariff setting, competitive procurement, and payment discipline.

The PURC determines the tariff level with two distinct mechanisms. The Multi-Year Tariff Order (MYTO), conducted every three to five years under the [PURC Act 1997](#), is a comprehensive review covering utilities' capital and operational expenditure, the regulated asset base, investment plans, and long-run generation mix projections. It sets the baseline tariff for the control period following investment hearings, stakeholder consultations, and regional public forums. The most recent MYTO established tariffs for 2026–2030 with a 9.86 percent increase effective January 2026. The Automatic Adjustment Formula (AAF), formalized under PURC Gazette No. 15 of February 2011, adjusts tariffs quarterly within the MYTO period for four cost variables beyond utilities' control: the GHS/USD exchange rate, domestic inflation, the hydro/thermal generation mix, and the WACOG. When applied as designed, the AAF maintains the real value of the MYTO baseline between major reviews. The latest quarterly AAF change reduced tariffs by 4.81 percent, reflecting cedi appreciation and lower inflation.

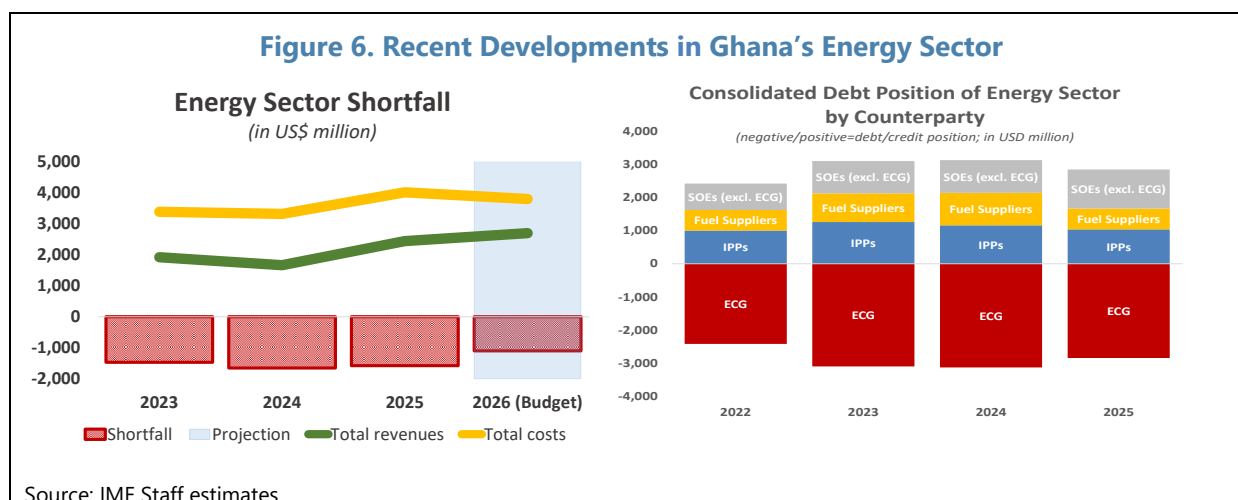
16. The inconsistent implementation of the sector's regulatory framework amplifies the interactions between the structural gaps (Box 1). Delays in adjusting tariffs in response to cost pressures²² and weak enforcement of payment obligations, especially from public sector consumers, have repeatedly converted temporary shocks into persistent financial imbalances.

D. The Sector's Financial Position

17. The energy sector has recorded sizable annual shortfalls in recent years, estimated at approximately 1–1½ percent of GDP (Figure 6). The annual gap between sector's revenues and costs (i.e., the energy sector shortfall) stood approximately at US\$1.4 billion in 2025 or 1.2 percent of GDP (US\$1.6 billion or 1.4 percent of GDP in 2024), reflecting the combined effect of the tariff, distribution, and collection gaps. While the resumption of tariff adjustments has supported cost recovery, the narrowing of the shortfall between 2024 and 2025 was driven primarily by improved macroeconomic conditions and a stronger cedi (lowering the GHS cost of USD-denominated obligations) and reduced reliance on liquid fuels, rather than by structural improvements in the

²² Between 2016 and mid-2022, tariffs increased only modestly despite significant exchange rate depreciation and rising fuel costs, and adjustments were again suspended ahead of the 2024 elections. In a context where a large share of costs is denominated in U.S. dollars and contractual obligations are fixed, delayed tariff adjustments convert temporary cost shocks into persistent financial deficits that accumulate as arrears.

sector's operational or collection performance. Also, the positive revenue growth (below 10 percent in real terms) experienced over the same time largely reflected demand growth rather than efficiency gains. These gains therefore remain fragile, absent sustained reform implementation.



18. These shortfalls have led to an accumulation of payables to IPPs and FS. Following a period of rapid buildup, the stock of outstanding payables reached a peak of about US\$2.2 billion (1.9 percent of GDP) in early 2025 before declining to about US\$1.7 billion at end-2025 (1.5 percent of GDP) mainly reflecting clearance of arrears with FS.²³ Nonetheless, the sector's stock of outstanding payables remains substantial, and continues to generate additional costs through penalties, financing charges, and strained supplier relationships.

19. The sector's financial imbalances have direct fiscal implications. The government makes payments to avoid a continuous accumulation of financial imbalances in the sector and prevent disruptions to electricity supply. Government interventions typically occur outside the CWM and take the form budget transfers to individual entities (i.e., IPPs, gas suppliers, FS) to settle ECG's outstanding obligations and/or off-budget operations through credit notes.²⁴ When such interventions are insufficient or delayed, arrears accumulate, reinforcing the cycle of financial stress. In 2025, government transfers to the energy sector amounted to about US\$2 billion in 2025 (US\$1.5 billion in 2024), of which approximately half covered current invoices and the remainder reduced the legacy debt stock. The NGC credit notes to gas suppliers totaled approximately US\$1 billion in 2025 from US\$0.4 billion in 2024.

²³ At the same time, the ECG's stock of arrears to the energy sector reached a peak of US\$3.5 billion in 2025Q2, due to the suspension of the quarterly tariff adjustments and CWM compliance failures ahead of the 2024 elections as well as insufficient MoF transfers. Subsequently, ECG's outstanding debt declined markedly to US\$2.8 billion at end-2025 on improved ECG revenue collection and CWM compliance.

²⁴ Credit notes are provided from the National Gas Clearinghouse (NGC) and offset government obligations to supply gas to IPPs against contractual fuel cost charges, reducing the cash outflow required.

20. The sector's financial weaknesses impose also macroeconomic costs that fall disproportionately on households and firms least able to absorb them. Recent World Bank's (WB) analysis shows that the vast majority of Ghanaian manufacturing firms report power outages that disrupt production, with those firms unable to afford backup diesel generators absorbing output losses directly. In addition, distribution losses of 31.3 percent in Ghana's northern areas serviced by NEDCo imply that supply reliability is weakest where household incomes are lowest and backup generation least accessible. The sector's financial condition and its service delivery performance are therefore intertwined problems with the structural gaps generating fiscal pressure coinciding with those producing unreliable power supply and deterring private investment. Closing such gaps is hence both a fiscal imperative and a precondition for sustained growth.

E. ECF-Supported Reforms: Progress and Remaining Gaps

21. The ECF-supported program has directly addressed the structural drivers of the sector's financial imbalances. Building on the authorities' [Energy Sector Recovery Program](#) (ESRP),²⁵ the ECF has focused on restoring cost recovery, strengthening ECG revenue collection, improving ECG operational efficiency, advancing private sector (PSP) participation in distribution, renegotiating onerous PPAs, and addressing legacy debt. These reform areas directly target the tariff, distribution, and collection gaps as well as the mechanisms through which financial shortfalls propagate to the government balance sheet discussed in Section III. The WB's assistance has complemented the ECF by providing results-based financing directly to the energy sector entities responsible for operational improvement.²⁶

22. Reforms to restore cost recovery have resulted in strengthening implementation of tariff-setting mechanisms (Figure 7). The resumption of quarterly tariff adjustments in 2025 marked an important step toward aligning tariffs with underlying costs, following their suspension in the run-up to the 2024 elections (Box 2).²⁷ The implementation of a new MYTO for 2026–30 has further supported cost recovery. These measures, alongside reduced ECG revenue underreporting and exchange rate movements, have contributed to an apparent narrowing of the tariff gap. In addition, increased use of domestic gas has helped contain generation costs by reducing reliance on more expensive liquid fuels.²⁸ However, the effectiveness of tariff adjustments depends critically on their consistent implementation. Past episodes of delayed or suspended adjustments highlight the

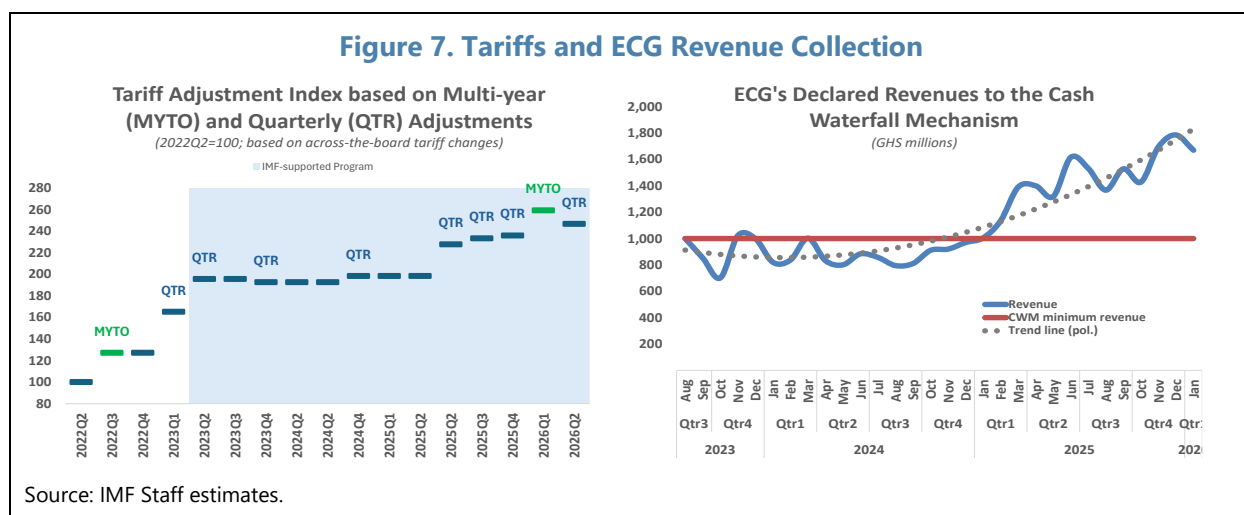
²⁵ The ESRP was established in 2019, in collaboration with the World Bank, to restore the power sector's financial stability. With the June 2023 Addendum, it identifies measures to reduce sector costs and increase revenues, while improving the corporate governance of energy sector state-owned enterprises. The ESRP also provides the institutional governance structure for reform implementation, bringing together the Ministry of Energy and the Ministry of Finance through an inter-ministerial Energy Sector Task Force.

²⁶ The WB PforR was approved in June 2024 and envisages measures to improve economic dispatch, ECG collection efficiency, energy accounting systems, customer services, financial management transparency, IPP invoicing, and clean cooking access.

²⁷ Electricity tariffs have increased by about 40 percent since March 2025 on a cumulative basis.

²⁸ This effort was supported by ENI's July 2025 expansion of OCTP gas processing capacity to 270 MMcfd, which increased the availability of domestic gas for thermal generation and reduced forced liquid fuel substitution.

risk that political economy pressures could lead to under-adjustment, allowing cost pressures to accumulate.



23. Efforts to reduce distribution losses have yielded limited results, with losses remaining at 27 percent at end-2024.²⁹ Supported by the World Bank PforR, the authorities have focused on improving ECG's operational performance, most notably through smart meter deployment and billing system upgrades. However, implementation of these initiatives has been slow, preventing a meaningful reduction in losses and limiting the effectiveness of tariff adjustments. Durable progress requires coordinated action across technical and commercial dimensions, including network infrastructure upgrades, enforcement against illegal connections, and improved billing systems.

24. Measures to improve revenue collection and strengthen payment discipline have contributed to a partial recovery in sector liquidity. In 2025, with support from the WB Development Policy Financing, the authorities strengthened the implementation of the CWM to ensure a more transparent and predictable allocation of ECG revenues, including through improved monitoring, enhanced compliance with CWM guidelines, and periodic independent validation of ECG collections (a program structural benchmark). At the same time, efforts to improve collection performance by enhancing billing systems and moving to PSP (paragraph 34.) in power distribution have begun to address some key longstanding weaknesses in the sector. Nonetheless, the durability of these improvements remains dependent on continued reform implementation and institutional safeguards.

²⁹ The WB PforR targets to bring them to 23.8 percent by December 2025 and 19.2 percent by December 2027; the GNEC targets 23 percent by 2030.

Box 2. Energy Sector Reform Slippages in 2024

The implementation of the Ghana's ERSP reforms weakened markedly in the run-up to the 2024 general elections. Reform slippages most notably included the suspension of quarterly tariff adjustments; a sharp deterioration of CWM compliance with ECG's declared collections falling well below independently validated actual collections; and a worsening of ECG distribution losses to 27.1 percent in 2024 (26.9 percent in 2023). The combined fiscal impact of these simultaneous slippages was significant with government transfers increasing from about US\$0.7 billion in 2023 to approximately US\$1.2 billion in 2024.

25. Progress has been made in reducing the stock of arrears through increased government transfers and renegotiation of PPAs and legacy debt. These efforts have contributed to a decline in arrears from their peak levels (paragraph 18.). However, the sector continues to carry a substantial stock of debt, which will require to adopt a fully financed and credible medium-term resolution strategy to ensure its clearance over the medium term. Absent such a strategy, arrears-related costs will continue to weigh on the sector's financial position and risk undermining recent gains in stabilization.

26. Institutional reforms have focused on strengthening governance and reducing the risk of future imbalances. Recent steps—including the adoption of a framework for PSP in ECG³⁰ distribution and of a legislative instrument (LI) mandating competitive procurement for new generation capacity—represent important progress. However, delays in operationalizing these reforms, including the issuance of implementing guidelines and the appointment of a transaction advisor (MEFP paragraph 50), have so far limited their immediate impact. More broadly, the absence of strong institutional safeguards to ensure consistent application of tariff adjustments and payment discipline remains a key vulnerability.

27. Overall, the ECF-supported reforms have helped stabilize the sector's financial position and address key structural weaknesses. However, progress remains incomplete. The persistence of tariff gaps, elevated distribution losses, collection challenges, and a significant stock of arrears indicates that the sector remains vulnerable to renewed financial stress. Sustained and coordinated implementation across all reform areas is therefore critical to achieving durable improvements.

F. Policy Priorities: From Stabilization to Transformation

28. Addressing sector's remaining vulnerabilities requires developing a credible and well-sequenced reform roadmap. This should prioritize actions to (i) prevent the re-emergence of large financial imbalances in the near term, (ii) strengthen operational and financial performance in the medium term, and (iii) establish institutional safeguards to ensure durability of reforms.

³⁰ The PSP framework is not a sale or divestiture rather the strategic deployment of private sector expertise through multiple concession arrangements to support and improve specific operational areas of ECG.

Near-Term Priorities: Lock in Financial Stabilization

- 29. Ensuring consistent tariff adjustment is the most immediate priority.** Regular application of the AAF is critical to maintaining cost recovery and preventing the re-emergence of tariff gaps. Strengthening institutional safeguards, including PURC's operational independence, to ensure compliance with existing tariff-setting framework and insulate tariff-setting decisions from *ad-hoc* intervention, particularly during periods of political pressure, will be essential.
- 30. Strict enforcement of the CWM remains central to restore payment discipline.** Full and transparent implementation of the CWM—including strict adherence to CWM guidelines, regular independent validation of collections, and timely publication of compliance reports—will enhance accountability and help prevent the re-accumulation of upstream arrears.
- 31. Delivering on a credible and fully financed arrears resolution strategy is also critical.** Diligently implementing the arrears clearing agreement reached in 2025 with IPPs and FS, while avoiding the accumulation of new obligations, will reduce penalty costs, restore supplier confidence, and improve fuel supply reliability. Without such a strategy, arrears will continue to weigh on the sector's financial position and undermine stabilization efforts.

Medium-term Priorities: Strengthen Operational and Financial Performance

- 32. Reducing distribution losses is essential to expanding the sector's effective revenue base.** Achieving sustained reductions in technical and commercial losses will require coordinated progress in metering, billing systems, and enforcement. Priorities include accelerating the rollout of smart meters, strengthening energy accounting systems, and improving oversight of technical and commercial losses.
- 33. Improving revenue collection, particularly from public sector entities, is equally important.** Measures should include strengthened enforcement of payment obligations, expanded use of prepayment arrangements, and structured repayment plans for large consumers. Enhancing transparency through regular independent audits of billing and collection systems would further support accountability.
- 34. Advancing PSP in distribution will help strengthen incentives for efficiency and service delivery.** The ultimate objective of the PSP reform is the transfer of defined operational areas within ECG to private concessionaires, introducing commercial discipline, performance accountability, and private capital into the distribution segment. Operationalizing this reform requires the Cabinet's approval of a strategy identifying a clear definition of the commercial model pursued and envisaging structured engagement with prospective private operators. Successfully concluding a concession arrangement would provide the operational discipline needed to drive sustained reductions in distribution losses, improve billing and collection performance, and strengthen accountability in service delivery.

Structural Priorities: Strengthen Governance and Prevent Recurrence of Fiscal Risks

- 35. Institutionalizing tariff-setting and regulatory processes is critical to ensuring the durability of reforms.** Strengthening the independence and operational credibility of the regulator (the PURC), particularly in the consistent application of tariff adjustments, will reduce the risk of policy slippages.
- 36. Enhancing transparency and financial governance across sector entities will improve accountability and risk management.** This includes timely publication of audited financial statements of all energy sector public enterprises, improved monitoring of sector-wide financial flows, and strengthened disclosure of contingent liabilities and quasi-fiscal operations.
- 37. Ensuring competitive and transparent procurement of new generation capacity is essential to containing future fiscal risks.** Effective implementation of the LI requiring competitive procurement of PPAs will help avoid the accumulation of costly contractual obligations and improve value for money in future investments.
- 38. Steadfast implementation of this roadmap will help strengthen the sector's financial viability and create the conditions for sustained private sector-led growth.** A financially sustainable sector—characterized by a creditworthy off-taker (ECG), predictable tariff adjustments, and disciplined procurement, will support investment in generation and distribution, while reducing reliance on costly emergency interventions. Improvements in domestic gas supply³¹ will further enhance these gains by reducing dependence on liquid fuels and improving cost stability. Together, these developments will enable the energy sector to fulfill its role as a critical enabler of Ghana's broader development strategy.

³¹ The OCTP project, operated by ENI with Vitol and GNPC, already supplies approximately 70 percent of Ghana's domestic gas for power generation. The July 2025 expansion of gas processing capacity to 270 MMcfd and the US\$1.5 billion investment commitment by ENI and its OCTP partners for further field development are expected to markedly increase gas supply over the medium term. Jubilee and TEN partners have separately committed approximately US\$2 billion to sustain and increase oil and gas output.

Table 1. Key Sector Entities and Financial Performance (2024)

Entity	Stage	Primary function	Ownership	Total assets FY2024 (GHS'm)	Revenue FY2024 (GHS'm)	Net profit/(loss) FY2024 (GHS'm)	Accounts status
GNPC	Upstream/midstream	Field equity; gas aggregation and on-selling	100% GoG	26,535	20,234	+662	Management accounts
GNGC	Midstream	Gas processing (Atuabo) and domestic transport	100% GoG	21,668	7,261	+228	Draft
BPA	Generation	Bui hydropower (404 MW installed)	100% GoG	26,125	2,073	+1,040	Draft
VRA	Generation	Akosombo and Kpong hydro; thermal plants	100% GoG	92,835	11,259	-570	Audited
GRIDCo	Transmission	National transmission system (6,472 km)	100% GoG	15,785	2,662	-91	Audited
ECG	Distribution/retail	Power distribution, southern/central Ghana	100% GoG	76,250	36,177	-8,256	Audited
NEDCo	Distribution/retail	Power distribution, northern Ghana	VRA subsidiary	Consolidated within VRA	—	—	—