

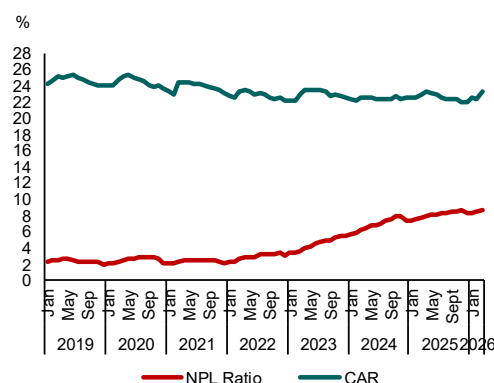
Annex 2. How Resilient Is Cambodia's Banking Sector Amid Rising NPLs⁵⁰

This Selected Issue revisits and significantly expands upon AMRO's 2024 reverse stress test exercise⁵¹ for Cambodia's banking sector, providing a more in-depth assessment of credit quality and capital adequacy amid the continued rise in non-performing loans (NPLs). The stress test results indicate that, under scenarios in which the banking sector's NPL ratio⁵² increases to 24 percent or 18.6 percent in 2026, the capital adequacy ratios of certain banks would decline below the corresponding regulatory thresholds of 15 percent and 17.5 percent, highlighting pockets of vulnerability within the banking system. In addition, our scenario analyses highlight the vulnerability of several small banks, which may have limited buffers to absorb further deterioration in asset quality.

Background

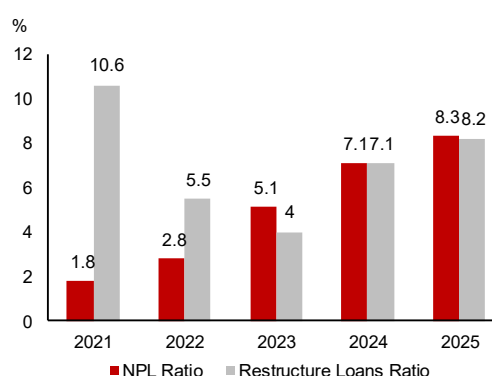
1. Elevated NPLs since 2023 have raised concerns over banks' capital levels, although the sector's average capital remained above regulatory requirements. Despite the overall adequacy of capital buffers, asset quality has continued to deteriorate amid the downturn in the credit cycle and the expiry of COVID-19 regulatory forbearance measures in 2023, contributing to a steady rise in NPLs. The average NPL ratio among deposit-taking institutions (DTIs) rose to 8.3 percent by end-2025,⁵³ compared with 7.1 percent in 2024 and 5.1 percent in 2023 (Figure A2.1). In addition to the withdrawal of the National Bank of Cambodia's (NBC's) second-phase forbearance measures, subdued credit growth in productive sectors, persistent weakness in the real estate market, and other near-term risks—including the border tensions—could further place additional pressure on banks' asset quality (Figure A2.2).

Figure A2.1. DTIs' CAR and NPL Ratio



Source: NBC; AMRO staff calculation

Figure A2.2. NPL Ratio and Restructured Loans Ratio



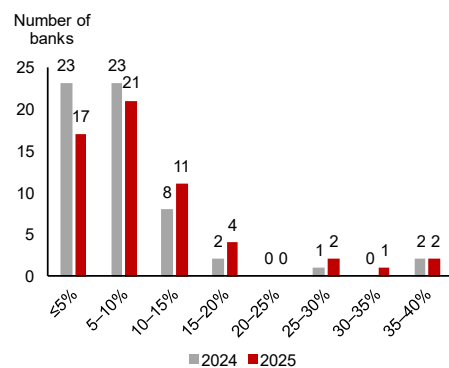
Source: NBC; AMRO staff calculation

2. Asset quality pressures persisted in 2025, as rising restructured loans ratio and increasing NPL ratios reflected heightened credit risk. Restructured loans to total loans ratio increased in 2025, while the NPL ratio continued to rise. Some institutions' credit quality performance did not improve in 2025, as a greater number of banks recorded higher NPL ratios compared to 2024, reflecting the slow pace of NPL resolution (Figure A2.3). The increase in NPLs was observed across diverse sectors, although the largest share remained concentrated in retail trade, agriculture, and real estate-related activities, including real estate, construction, and mortgages (Figure A2.4). This reflects the vulnerability of these sectors and explains the continued caution among banks in extending credit to these activities. Moreover,

⁵⁰ Prepared by Vithyea You, Associate.⁵¹ See San and Tsang (2024).⁵² The banking sector examined in this study comprises 58 deposit-taking institutions (DTIs).⁵³ NPL ratio continued was 8.3 percent for DTIs and 13 percent for non-deposit-taking institutions (NDTIs) in December 2025.

the rise in restructured loans to approximately 9 percent in 2025 points to elevated latent credit risks, as a share of these loans may subsequently deteriorate into NPLs.

Figure A2.3. Changes in the NPL Ratio Distribution between 2024 and 2025



Source: NBC; AMRO staff calculation

Figure A2.4. Share of NPLs by Sector in DTIs



Source: NBC; AMRO staff calculation

3. Against this backdrop, banking sector's capital adequacy assessments and reverse stress tests on capital are conducted to evaluate banks' resilience under adverse conditions. Capital stress testing provides key benefits for assessing the resilience and stability of the banking sector. First, it offers a forward-looking perspective that enables regulators to take timely and pre-emptive actions by assessing the solvency of financial institutions under adverse economic scenarios. Second, it condenses complex information—such as intricate business models, hidden exposures, and opaque balance sheets—into interpretable metrics (Schuermann, 2014). As a result, stress tests enhance transparency in the financial sector and support effective policy formulation and communication.

Methodology

4. The analysis employs a two-step approach comprising: (i) a capital adequacy assessment; and (ii) a reverse stress test. The first step evaluates the adequacy of banks' capital buffers and assesses the overall resilience of the banking system based on prevailing capital positions. The second step applies reverse stress testing to identify plausible adverse scenarios that could place the financial system under severe stress and potentially undermine financial stability.

5. Following Cihak (2004), two approaches are applied: a threshold-based approach focusing on critical outcome variables and a worst-case scenario approach assessing the plausibility of adverse events with other assumptions.⁵⁴ The reverse stress test was conducted at the system level using two CAR thresholds: 17.5 percent and 15 percent. The 17.5 percent threshold, referred to as Scenario 1, incorporates the 2.5 percent Capital Conservation Buffer (CCB) and indicates the point at which banks' lending capacity may become constrained. Meanwhile, the 15 percent threshold, referred to as Scenario 2, represents a severe stress level requiring strong supervisory intervention. The threshold-based approach estimates the level of stress that would reduce the system-wide CAR to 17.5 percent, while the worst-case scenario approach estimates the stress required to lower the CAR to 15 percent. The exercise also estimates the capital needed to absorb further increases

⁵⁴ The assumptions for the reverse stress test including (i) credit growth of 5 percent, (ii) risk-weighted assets growing at the same rate compared to 2024, (iii) total regulatory capital in 2025 based on total regulatory capital in 2024 after-tax profit/loss, and (iv) loan loss provision at around 60 percent, same similar to the provision coverage ratio 2025.

-The capital requirement includes the minimum Tier 1 of 11 percent, CAR of 15 percent, and CAR 17.5 percent (include capital conservation buffer of 2.5 percent).

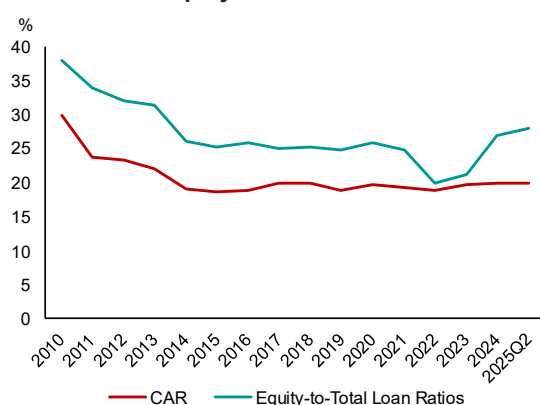
-Due to data limitations, such as the absence of publicly available data on the likelihood of an increase in NPLs, the quality of NPL data, and financial soundness indicators by banks, the stress test for individual banks cannot be obtained.

in NPLs while maintaining solvency and lending capacity and assesses the vulnerability of individual DTIs based on their capital positions. The reverse stress test was also conducted at the individual DTI level, with the equity-to-total loans (E/L) ratio⁵⁵ used as a proxy for banks' capital adequacy ratios (CARs) in this exercise.

Capital Adequacy Assessment

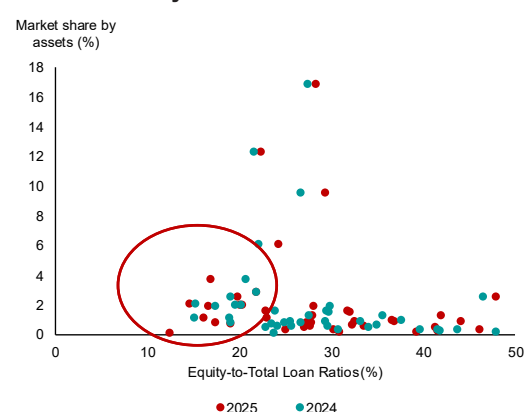
6. The capital levels of some small DTIs remain vulnerable if additional losses materialize. In general, capital adequacy is assessed using the CAR; however, individual CAR data are not publicly available. Therefore, we use the equity-to-total loan (E/L) ratio as a proxy, which is generally higher than the CAR across all periods but follows a similar trend (Figure A2.5). Figure A2.6 presents the individual DTIs' E/L ratios, showing that some small DTIs recorded relatively low ratios in 2025, with several also deteriorating compared to 2024. This suggests that the capital buffers of some small DTIs remain relatively thin, limiting their capacity to absorb additional shocks if losses increase further and timely capital injections are not secured.

Figure A2.5. Co-movements between the CAR and Equity-to-Total Loan Ratio



Source: Haver Analytics; AMRO staff calculation

Figure A2.6. Changes in DTIs' Equity-to-Total Loan Ratios by Market Share: 2024 versus 2025



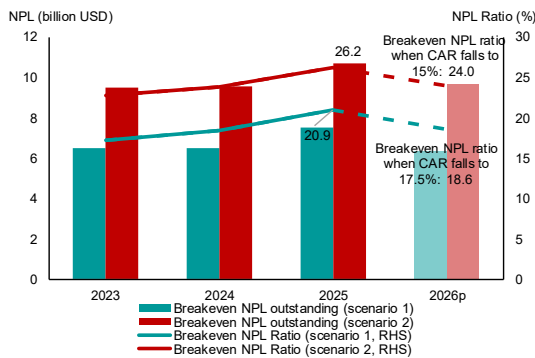
Source: NBC; AMRO staff calculation

Results of Capital Reverse Stress Test

7. The reverse stress test suggests that the banking system continues to maintain adequate capital buffers to absorb further losses from asset quality deterioration. Based on 2025 data, the 2026 reverse stress test results indicate that the banking sector, particularly DTIs, can absorb an NPL ratio of up to 24 percent, namely, the breakeven NPL⁵⁶ ratio, before the CAR declines to the regulatory minimum at 15 percent. The sector could also withstand an NPL ratio of up to 18.6 percent—equivalent to additional losses of approximately USD6.3 billion—before the CAR falls to the regulatory minimum of 17.5 percent (Figure A2.7). The exercise was also conducted separately for the top ten DTIs, with the results indicating that these institutions generally maintain sufficient capital buffers to withstand credit risk shocks (Figure A2.8). Nevertheless, continued vigilance remains warranted amid prevailing economic and financial headwinds.

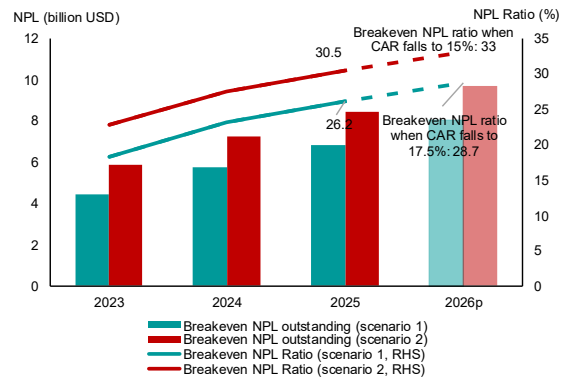
⁵⁵ The data were obtained from publications available on the NBC website up to 2025 and subsequently projected by AMRO for the current assessment.

⁵⁶ "Breakeven NPL" refers to the estimated level of stress—measured by the amount of NPL outstanding and the NPL ratio—that would reduce CAR to 17.5 percent and 15 percent.

Figure A2.7. Breakeven NPL Ratios for All DTIs under Different CAR Threshold Scenarios

Source: NBC; AMRO staff calculations

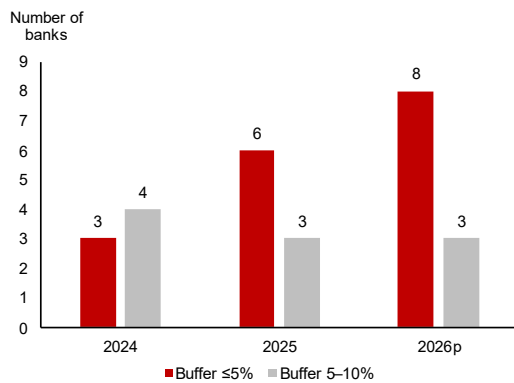
Note: Scenario 1 refers to the CAR threshold of 17.5 percent, while Scenario 2 refers to the 15 percent threshold.

Figure A2.8. Breakeven NPL Ratios for Top 10 DTIs under Different CAR Threshold Scenarios

Source: NBC; and AMRO staff calculations

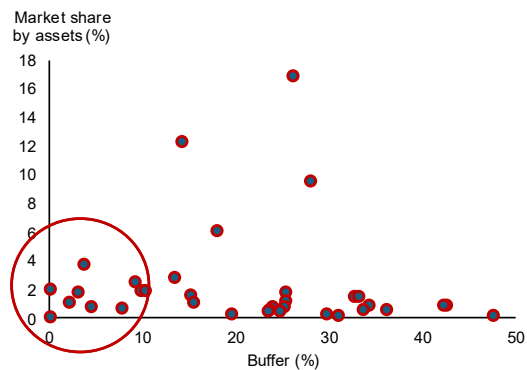
Note: Scenario 1 refers to the CAR threshold of 17.5 percent, while Scenario 2 refers to the 15 percent threshold.

8. The reverse stress test results indicate that a few small DTIs remain vulnerable due to limited capital buffers against shocks.⁵⁷ The findings also point to uneven loss-absorbing capacity⁵⁸ across DTIs, with several institutions showing weaker resilience to rising NPLs. The number of vulnerable DTIs increased from 2024 to 2025 and could rise further in 2026 if asset quality deteriorates further (Figure A2.9). A few DTIs are already close to the minimum CAR threshold of 15 percent, limiting their capacity for additional lending and loss absorption (Figure A2.10). While the banking system remains resilient at the aggregate level, the financial soundness of some smaller DTIs could come under pressure if economic and financial conditions remain subdued.⁵⁹

Figure A2.9. Number of Banks with Low Buffers above the 15% CAR Threshold

Source: NBC; AMRO staff calculation and projection.

Note: 1. Actual and 2026p, 2. Loss-absorption capacity, referred to as the “buffer” reflects the additional capacity of DTIs to withstand a further increase in the NPL ratio.

Figure A2.10. Bank Size and Loss-absorption Capacity under the 15% CAR Threshold (2025)

Source: NBC; AMRO staff calculation and projection.

Note: Loss-absorption capacity, referred to as the “buffer” reflects the additional capacity of DTIs to withstand a further increase in the NPL ratio.

⁵⁷ The projections incorporate bank-specific characteristics using publicly available bank-level variables. Nevertheless, the exercise is subject to limitations due to the lack of specific granular data on individual banks, which may be considered confidential by the authorities.

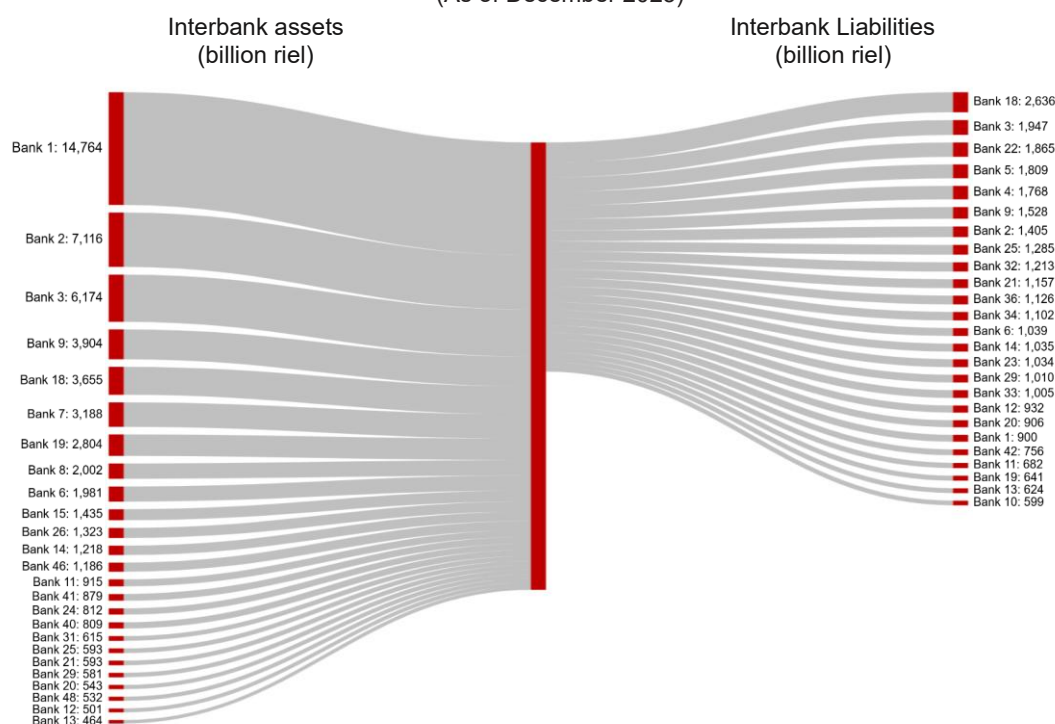
⁵⁸ Loss-absorption capacity is referred to as the “buffer” in the chart (Figure A2.10 and A2.11), reflecting the additional capacity DTIs have to withstand a further increase in the NPL ratio.

⁵⁹ Ideally, this analysis should complement authorities’ stress tests, given their greater access to supervisory information and data. In addition, the analysis may overstate the breakeven NPL threshold for the individual institution, because it uses the equity-to-loan (E/L) ratio as a proxy for the CAR, while the E/L ratio is generally higher than the actual CAR.

Interbank Exposures and Contagion

9. A few DTIs dominate interbank placements, reflecting their relatively larger balance sheet size. Interbank exposures can act as channels of risk transmission across institutions, as a counterparty default may generate immediate losses for creditor banks, potentially triggering further asset deterioration and amplifying systemic contagion within the banking system. Figure A2.11⁶⁰ shows that interbank exposures are unevenly distributed, with some institutions exhibiting higher interconnectedness. While many DTIs have limited system-wide exposure, their relative exposure to individual balance sheets remains significant. The larger size of interbank assets relative to interbank liabilities may reflect placements by the 25 DTIs with non-resident financial entities outside the domestic banking sector, which are not observable from the published data. Overall, the figure suggests that interconnectedness within the banking system remains limited, reducing the potential spillover effects from contagion risk. Nevertheless, the concentration of large exposures among a few DTIs in the interbank market could constrain liquidity conditions for other banks and heighten concerns related to systemic importance.

Figure A2.11. Interbank Exposure of Top 25 DTIs
(As of December 2025)



Source: NBC and AMRO calculation

Note: Interbank assets consist of placements with and amounts due from banks, while interbank liabilities refer to amounts owed to banks as reported in DTIs' balance sheets.

Conclusions

10. Our exercise indicates that the banking sector remains under pressure from legacy asset quality issues and emerging risks, with vulnerabilities expected to persist in 2026. While the banking sector overall maintains sufficient capital buffers to absorb additional credit losses, smaller banks remain more vulnerable due to lower capital levels, weaker profitability, and higher NPL ratios, which reduce their resilience to shocks. Interconnectedness risks remain contained overall, although interbank exposures are concentrated among a few DTIs,

⁶⁰ The data were obtained from the NBC Supervision Annual Report 2025.

making these institutions potential channels for spillover risk, while smaller DTIs maintain relatively limited linkages.

11. Policy efforts should focus on addressing rising NPLs and safeguarding financial stability. This includes closely monitoring sectoral NPL trends, ensuring adequate provisioning and proper asset valuation, and strengthening surveillance of banks' capital positions and loss-absorbing capacity. Measures to improve the timely resolution of distressed assets should also be prioritized by addressing legal and procedural constraints that delay NPL resolution.

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