



# AMRO Annual Consultation Report

## Thailand – 2025

ASEAN+3 Macroeconomic Research Office (AMRO)

December 2025

## Acknowledgments

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1. This Annual Consultation Report on Thailand has been prepared in accordance with the functions of AMRO to monitor and assess the macroeconomic status and financial soundness of its members; identify relevant risks and vulnerabilities; report these to member authorities; and if requested, assist them in mitigating these risks through the timely formulation of policy recommendations. This is being done in accordance with Article 3 (a) and (b) of the AMRO Agreement.
2. This Report is drafted on the basis of the Annual Consultation Visit of AMRO to Thailand from August 18 to August 29, 2025 (Article 5 (b) of the AMRO Agreement). The AMRO Mission team was led by Allen Ng (Group Head and Mission Chief) and joined by Haobin Wang (Desk Economist), Benyaporn Chantana (Back-up Economist), Ravisara Hataiseree (Fiscal Specialist), Xianguo Huang (Senior Economist) and Yuhong Wu (Research Analyst). AMRO Director Mr. Yasuto Watanabe and Chief Economist Dr. Dong He participated in key policy meetings and courtesy calls with the authorities. The AMRO Annual Consultation Report on Thailand for 2025 was peer reviewed by a group of economists from AMRO's Country Surveillance, Financial Surveillance, and Fiscal Surveillance teams; endorsed by the Policy and Review Group; and approved by Dr. Dong He, AMRO Chief Economist.
3. The analysis in this Report is based on information available up to November 17, 2025.
4. By making any designation of or reference to a particular territory or geographical area, or by using the term "member" or "country" in this Report, AMRO does not intend to make any judgments as to the legal or other status of any territory or area.
5. On behalf of AMRO, the Mission team wishes to thank the Thai authorities for their comments on this Report, as well as their excellent meeting arrangements and hospitality during our visit.

**Disclaimer:** The findings, interpretations and conclusion expressed in this Report represent the views of the staff of ASEAN+3 Macroeconomic Research Office (AMRO) and are not necessarily those of its members. Neither AMRO nor its members shall be held responsible for any consequence from the use of the information contained herein.

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## Executive Summary

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1. **Recent growth in the Thai economy remained subdued, weighed down by weakness in domestic demand.** GDP grew by 2.5 percent in 2024, as private consumption slowed sharply and private investment contracted amid sluggish income growth and fragile sentiment. These trends persisted into 2025, with private consumption rising by 2.6 percent in the first three quarters, down from nearly 7 percent in 2023. This follows an overall sluggish post-pandemic recovery, which has been repeatedly interrupted by a series of external and domestic shocks, leaving Thailand's growth trajectory well below its pre-pandemic trend and regional peers.

2. **However, some positive developments are emerging.** After contracting for several consecutive quarters, private investment rebounded in Q2 and Q3 2025 amid a surge in foreign direct investment (FDI) commitments. Increasing investments in high-value sectors—including electric vehicles (EVs), electronics, and data centers—offer pathways to more resilient growth. Overall, Thailand's GDP grew by 2.4 percent in the first three quarters of 2025, supported by a rebound in public spending and front-loaded exports ahead of US tariffs.

3. **Looking ahead, growth is projected to moderate in the near term but improve in the medium term.** Growth is projected to slow to 2.2 percent for the year and 1.9 percent in 2026, reflecting the unwinding of front-loaded exports and persistent private sector weakness. However, medium-term growth is expected to gradually improve, supported by more investment-focused fiscal spending and increasing FDI in EVs, electronics, and data centers.

4. **Inflation is expected to remain low.** Headline inflation averaged 0.4 percent in 2024 and turned negative in Q2 and Q3 2025, mainly reflecting supply-side factors such as lower energy prices amid weak domestic demand. Inflation is expected to remain below target, at 0.5 percent and 0.8 percent in 2025 and 2026. In the absence of significant supply-side shocks, inflation expectations are expected to remain well anchored within the Bank of Thailand's inflation target range of 1 to 3 percent going forward.

5. **External position has remained resilient, but capital outflows persist.** The current account surplus widened to 2.1 percent of GDP in 2024 and 3.6 percent in the first three quarters of 2025, driven by strong goods export and recovering tourism receipts, but the pace of tourism recovery was weaker than expected due to a sharp decline in the number of Chinese tourists. The baht appreciated in real effective terms amid record-high reserves and strong FDI inflows, but portfolio outflows persisted as Thai residents continued seeking overseas investment opportunities.

6. **Fiscal deficit remains elevated, pushing public debt higher.** Fiscal deficit is expected to widen to 4.5 percent of GDP in FY2025, as public expenditure rises to 19.6 percent of GDP amid continued stimulus measures, while revenue remains stable at 15.1 percent of GDP. As a result of sustained fiscal expansion and subdued growth, public debt is expected to rise to 65.6 percent of GDP in FY2025, and to peak at slightly above 69 percent in 2028.

7. Credit growth has remained subdued reflecting both the weak demand for loan and a more cautious lending approach amid a slow economic recovery. Overall bank credit contracted in 1H 2025, led by declines in SME and consumer loans. Asset quality deteriorated modestly, with SME NPLs rising. However, banks remain well-capitalized and profitable with strong buffers.

8. Risks are tilted to the downside. External risks include the escalation of US protectionist measures and a continued shortfall in tourist arrivals. Domestically, the key risk is a self-reinforcing downturn in domestic demand driven by weak income, tight credit, and political uncertainty. Upside potential exists if surging FDI commitments could translate into stronger sustained investment activities.

9. In the near term, the immediate priority is to prevent a self-reinforcing downturn in domestic demand through continued macroeconomic policy support.

- Monetary policy should remain supportive amid weakening private sector momentum and mounting uncertainty. The current accommodative stance is appropriate, with scope to ease further if domestic demand proves weaker or more persistent. The Bank of Thailand (BOT)'s emphasis on the timing and effectiveness of policy adjustment is well-supported, given the elevated uncertainty in both domestic and external outlooks.
- Financial policy should strike a balance between managing legacy debt vulnerabilities and supporting new productive credit. While financial conditions have broadly stabilized, many households and SMEs still face debt servicing challenges. Continued efforts to restructure or reschedule distressed loans are critical to reduce debt overhang.
- Fiscal policy should remain supportive in the near term, especially for vulnerable groups, particularly if domestic demand weakness persists. The recent shift of the digital wallet scheme toward infrastructure and productivity-enhancing investments is welcome and should be implemented swiftly to support near-term growth and long-term competitiveness. Over the medium term, fiscal consolidation efforts should continue to rebuild fiscal space amid growing demands on public resources.

10. Over the longer term, structural policy should be anchored on revitalizing domestic transformation to lift Thailand's potential growth, underpinned by stronger execution of reforms in innovation, human capital, and infrastructure. Central to this is harnessing FDI as a catalyst for workforce upskilling, technology transfer, and stronger domestic linkages, including in secondary cities. This approach could deliver more inclusive, regionally balanced growth while upgrading Thailand's existing industrial and service sector strengths—particularly in automotive, electronics, and digital services—and enhancing Thailand's overall global competitiveness.

## Background Context

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### *A Delayed and Disrupted Post-Pandemic Recovery*

**1. Thailand's post-pandemic recovery has been among the weakest in the region, weighed down by a series of compounding shocks.** Real GDP expanded by just 2 percent annually between 2021 and 2024—well below the ASEAN+3 average of over 4 percent. As of 2024, real output is only 2.4 percent above pre-pandemic (2019) levels, while the regional average has already surpassed 10 percent. Thailand's potential growth has also declined—from above 3 percent pre-COVID to an estimated 2.5 percent at present—as the pandemic and the shocks since has likely led to a downward shift in its trend growth<sup>1</sup>. This prolonged underperformance reflects a sequence of domestic and external setbacks that have repeatedly derailed Thailand's recovery momentum.

**2. The first wave of shocks stemmed from the COVID-19 pandemic.** Like many of its peers, Thailand suffered a sharp contraction in 2020. However, the economy was hit harder than most due to its heavy reliance on tourism receipts, which accounted for over 10 percent of GDP before the pandemic<sup>2</sup>. More importantly, while other regional economies began recovering in 2022–2023, Thailand's rebound lagged as China—its largest source of inbound tourists—maintained strict border controls longer than others. This prolonged absence of Chinese tourists extended the drag on Thailand's tourism sector well beyond the initial phase of the pandemic.

**3. Even as borders reopened and private sector activity began to pick up, domestic political uncertainty created renewed headwinds.** In the aftermath of the pandemic, Thailand experienced a strong rebound in private consumption and investment, supported by pent-up demand and reopening momentum. However, recurring delays in budget approvals—particularly during the political transition in 2023—constrained fiscal disbursements and public investment. Public consumption and capital spending remained weak, offsetting private sector gains and resulting in an uneven recovery. Meanwhile, some local manufacturers were losing market share and profitability amid rising imports of furniture, textiles, apparel, and small electrical appliances.

**4. By mid-2024, public investment finally began to rebound following the approval of the FY2024 budget, yet new headwinds quickly emerged.** Private consumption began to lose momentum amid sluggish income growth, tight credit conditions, and still-elevated household debt. Investment also weakened, particularly in the automotive sector. At the same time, sweeping US tariffs on Thai exports, alongside renewed political uncertainty, further dampened investor confidence and external demand. These recent shocks—explored in the next section—highlight that Thailand's recovery remains precarious despite recent improvements in public spending.

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<sup>1</sup> The decline in potential growth reflects a prolonged downshift in Thailand's trend growth following the pandemic, driven by a sequence of compounding shocks and the overall decline in investment growth. For a more in-depth analysis, please refer to the Selected Issues paper, "Thailand's Long-Term Growth Potential: The Case for Reform," in AMRO's 2024 Annual Consultation Report on Thailand.

<sup>2</sup> Tourism receipts as a share of GDP was about 11.8 percent in 2019.

## A. Recent Developments and Outlook

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### A.1 Real Sector Development and Outlook

*Private Sector Weakness Offsets Public Sector Rebound and External Resilience, but Positive Signs Are Emerging*

**1. Thailand's growth performance in 2024 and the first half of 2025 was marked by a divergence between public and private sector dynamics.** Private sector demand softened, with private consumption growth slowing from 6.9 percent in 2023 to 4.4 percent in 2024, and further to 2.6 percent in the first three quarters of 2025 (Figure 1). The slowdown in consumption was broad-based, affecting durable goods, services, and semi-durable spending amid sluggish income recovery. Consumer confidence also declined, as shown in recent surveys<sup>3</sup>, adding to household caution amid economic and job market concerns. Private investment was weak—contracting by 1.6 percent in 2024 and 0.9 percent in Q1 2025—mainly due to declines in real estate and traditional auto manufacturing. However, private investment posted a strong 4.1 and 4.2 percent rebound in Q2 and Q3 2025—driven by a recovery in automotive investment and robust growth in machinery and equipment—suggesting that the translation of ongoing FDI inflows into private investment may be gaining momentum (Figure 2 and 3).

**2. A rebound in public spending and resilient export growth have cushioned the private sector slowdown.** Following the delayed approval of the FY2024 budget, public investment improved—rising by 4.8 percent in 2024 and by 7.7 percent year-on-year in the first three quarters of 2025—helping to offset soft private sector demand. Goods exports grew by 5.9 percent in 2024 amid a continued global trade upcycle and by 13.8 percent in the first three quarters of 2025, driven by robust electronics exports and front-loaded shipments ahead of anticipated US reciprocal tariffs. As a result, Thailand's GDP registered 2.5 percent growth in 2024 and 2.4 percent in the first three quarters of 2025.

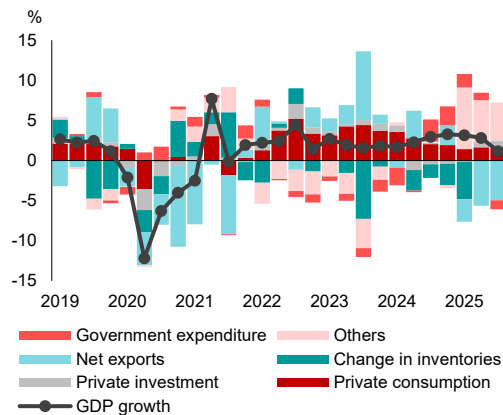
**3. On the production side, growth in 2024 and the first three quarters of 2025 was driven by services, while manufacturing remained weak.** The services sector remained the most consistent growth engine, expanding by 3.9 percent in 2024 and 3.3 percent in the first three quarters of 2025, supported by growth in wholesale and retail trade, accommodation and food services, and transport activities. However, growth of the accommodation and food services sub-sector declined from 9.6 percent in 2024 to 3.3 percent in the first three quarters of 2025, amid the slowdown in tourist arrivals. Agricultural output contracted by 1.1 percent in 2024 but rebounded strongly by 5.1 percent in the first three quarters of 2025, supported by favorable weather and improved crop yields. Manufacturing remained sluggish—contracting by 0.5 percent in 2024 and growing by 0.4 percent in the first three quarters of 2025—in part due to continued weakness in domestically-oriented and mid-tier export industries, despite some resilience in high-end export producers such as computers and canned seafood.

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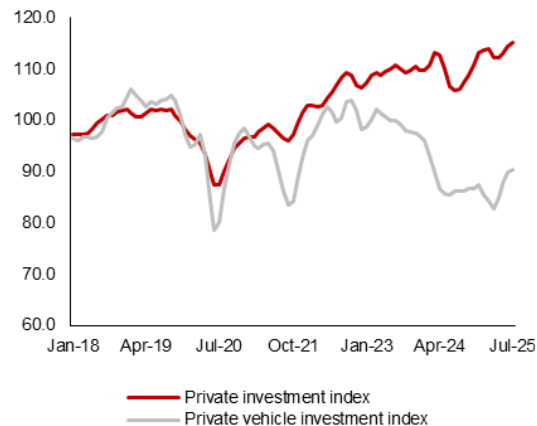
<sup>3</sup> For example, surveys on consumers sentiments by The University of the Thai Chamber of Commerce (UTCC) and Ministry of Commerce.



**Figure 1. GDP growth by Demand Components**



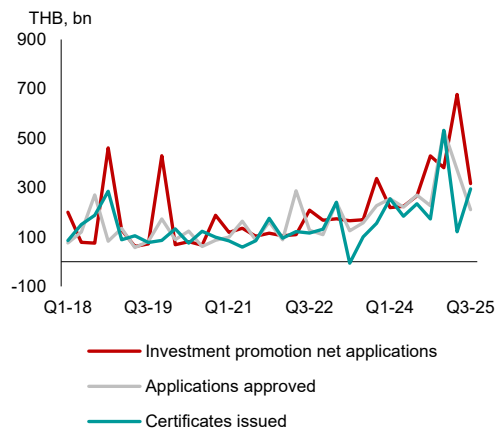
**Figure 2. Private Investment Index and Private Vehicle Investment Index**



Source: National authorities via CEIC; and AMRO staff calculations.

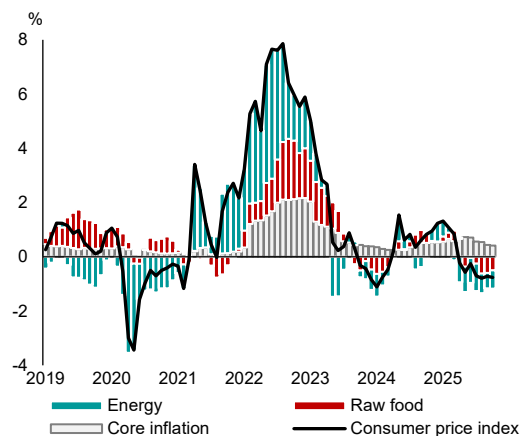
Source: Bank of Thailand.  
Note: Index (2018 = 100); seasonally adjusted, 3-month moving average.

**Figure 3. Board of Investment (BOI) Promotion Statistics**



Source: Board of Investment (BOI).

**Figure 4. Headline Inflation**



Source: Bank of Thailand via CEIC.

**4. Looking ahead, growth is projected to moderate in 2025–26 amid near-term headwinds, but the medium-term outlook is more positive given emerging positive shifts.** Despite the strong performance in the first half of 2025, real GDP growth is projected to slow to 2.2 percent in 2025 and 1.9 percent in 2026. Thailand’s recent export surge is expected to fade and may even see a “payback” contraction in the second half of 2025. Private consumption and investment are likely to remain constrained by weak income growth and elevated uncertainty from domestic politics and global trade tensions. Nonetheless, important positive shifts are underway—including the pivot of the digital wallet scheme from cash handouts to investment-led fiscal stimulus, rising high-tech investments in sectors like EVs and data centers, and an expectation of continued tourism recovery—that are helping to lay a stronger foundation for a more resilient medium-term recovery. As these growth drivers become more firmly entrenched, economic growth is expected to strengthen steadily, reaching above 3 percent by 2029.



**5. Thailand's labor market remains broadly stable.** The unemployment rate held steady at 0.88 percent in Q4 2024 and inched up slightly to 0.91 percent in Q2 2025. The robust labor market has been supported by service industries—including tourism, hospitality, and related transport—which continue to absorb new workers and support household incomes, even as hiring in sectors like automotive and construction remains subdued.

**6. Inflation in Thailand has remained persistently soft and largely below the target range.** Headline inflation averaged 0.4 percent in 2024 and fell into negative territory in Q2 2025 (Figure 4), mainly due to supply-side factors such as lower energy prices, government subsidy measures and lower raw food prices following favorable weather conditions. Core inflation remained low, averaging 0.6 percent in 2024 and rising modestly to 0.8 percent by July 2025, driven mainly by higher prepared food prices from the gradual passthrough of rising input costs.

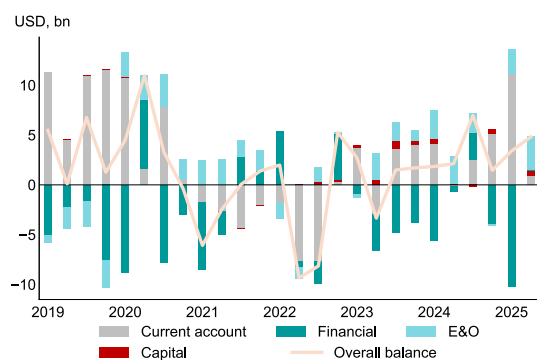
**7. Headline and core inflation are projected to remain subdued through 2025 and 2026.** Headline inflation is forecast at 0.5 percent in 2025 and 0.8 percent in 2026, up from 0.4 percent in 2024 but remain below target. Core inflation is expected to reach 1.0 percent and 0.8 percent in 2025 and 2026 respectively, up from 0.6 percent in 2024. The subdued trajectory for headline inflation is mainly driven by lower projected global energy prices. In the absence of significant supply-side shocks, inflation expectations are expected to remain well anchored within the Bank of Thailand's inflation target range of 1 to 3 percent going forward.

**Authorities' views:** The authorities broadly agreed with AMRO's assessment of the Thai economy, noting that economic momentum remains fragile despite stronger-than-expected growth in the first half. The authorities' growth forecasts for 2025 and 2026 are in line with AMRO's, with domestic demand expected to remain soft amid weak tourism numbers, rising import competition, and subdued private sector sentiment. While green shoots are emerging from FDI inflows, structural weaknesses persist.

## A.2 External Sector

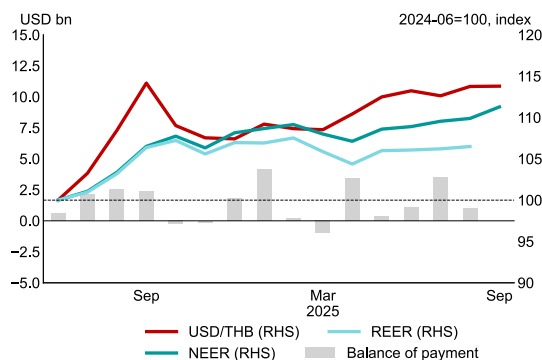
**8. Thailand's current account surplus widened in 2024 and the first three quarters of 2025, supported by an increase in tourism receipts and a widening trade surplus.** The current account surplus increased from 1.5 percent of GDP in 2023 to 2.1 percent in 2024 and 3.6 percent in the first three quarters of 2025 (Figure 5). The improvement in 2024 was primarily driven by strong travel receipts, which helped narrow the services deficit. However, tourism recovery has been below expectation in 2025, with tourist arrivals declining by 13.5 percent and international tourism receipts falling by 8.4 percent in Q3 2025. International tourism receipts have fallen less than tourist arrivals due to a more diversified and higher-spending visitor base. In the first three quarters of 2025, strong goods export growth, particularly in machinery, boosted the surplus. While subdued in Q1, overall imports—machinery and gold in particular—gained momentum since Q2 and narrowed the current account surplus.

Figure 5. Balance of Payment



Source: National authorities via Haver; and AMRO staff calculations

Figure 6. Exchange Rate



Source: National authorities via Haver; and AMRO staff calculations

**9. Thailand's financial account recorded a deficit in 2024 and Q1 2025, primarily driven by robust overseas portfolio investment by Thai residents and continued foreign equity outflows.** Thai investors significantly increased their portfolio holdings of foreign equities and debt instruments, while non-resident investors further reduced their exposure to Thai equities. In contrast, net direct investment turned positive, supported by a rebound in FDI inflows, which rose to USD 9.8 billion—up from USD 7.0 billion in 2023—mainly into the electronics, machinery, and automotive sectors. Outward investment by Thai firms fell sharply, reflecting weaker risk appetite amid global uncertainty. Nevertheless, the financial account turned from net outflow to a small inflow, aided by larger FDI inflows in Q2 2025. Despite easing domestic bond yields, persistently low inflation and a stronger baht raised expected real returns, supporting portfolio inflows

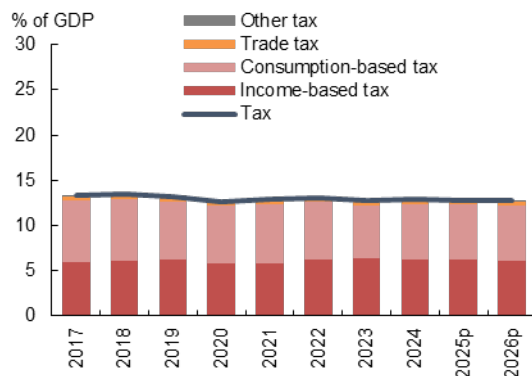
**10. Thailand's external position continued to strengthen in the second half of 2024 and into 2025.** Gross international reserves climbed to a record high of USD 273.3 billion in September 2025, equivalent to about 8.0 months of imports. External debt also improved, declining from 38.8 percent of GDP in 2023 to 35.4 percent in Q1 2025, largely due to a reduction in long-term debt. This was accompanied by a rise in the reserve-to-short-term debt ratio and a decline in the external debt service burden.

**11. While the Thai baht appreciated against the US dollar noticeably from mid-2024, the effective exchange rates remained relatively stable (Figure 6).** The baht maintained its strength after a temporary dip in Q4 2024. The strengthening of the Thai baht is partly supported by a stronger overall balance of payments (Figure 5) and aligns with the broader global trend of a weaker U.S. dollar. Notably, both the nominal and real effective exchange rates have appreciated to a lesser extent, reflecting the fact that the currencies of many of Thailand's major trading partners have also strengthened against the dollar, while Thailand's lower inflation has helped offset real appreciation pressures.

## A.3 Fiscal Sector

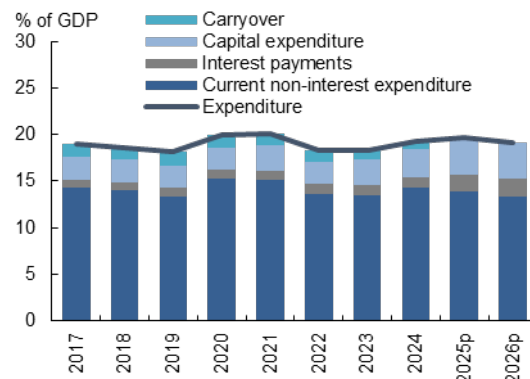
**12. Thailand's fiscal deficit is expected to widen on account of stimulus-driven public spending, while revenue collection has held up in line with the budget.** The fiscal deficit is projected to widen to 4.5 percent of GDP in FY2025 from 4.0 percent in the previous year.<sup>4</sup> Expenditure in FY2025 is expected to rise to 19.6 percent of GDP from 19.3 percent in FY2024 with the continuation of the digital wallet program, which was suspended in May 2025 and redirected to investment-led fiscal stimulus in recognition of the current economic conditions.<sup>5</sup> Meanwhile, revenue is projected to remain broadly stable at 15.1 percent of GDP, supported by steady income-based taxes. For FY2026, revenue-to-GDP is expected to reach 15.0 percent and expenditure to decline to 19.1 percent of GDP, narrowing the deficit to 4.1 percent. Beyond FY2026, the authorities plan to consolidate further by normalizing expenditure and implementing tax measures to reduce the deficit to around 3.4 percent of GDP over the medium term (Figure 7 to 9).

Figure 7. Government Revenue



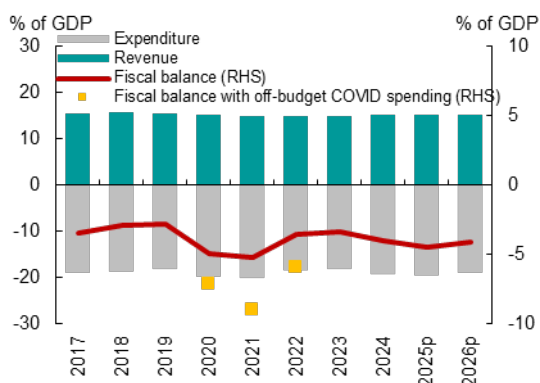
Source: TMOF; and AMRO staff projections.

Figure 8. Government Expenditure



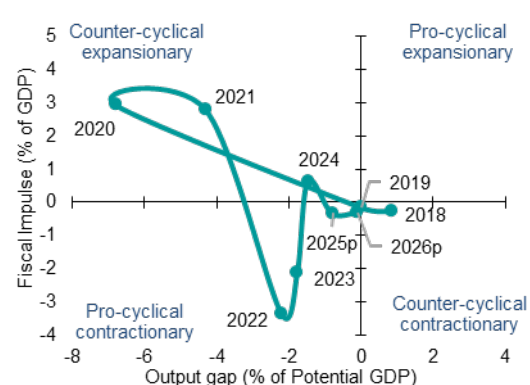
Source: TMOF; and AMRO staff projections.

Figure 9. Fiscal Balance



Source: TMOF; and AMRO staff projections.

Figure 10. Fiscal Stance and Output Gap



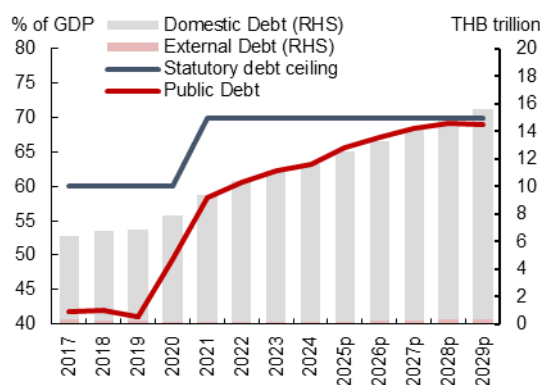
Source: TMOF; and AMRO staff projections.

Note: The fiscal impulse in FY2025-2026 turned slightly negative due to higher debt repayment.

<sup>4</sup> The fiscal year runs from October to September.<sup>5</sup> The THB 450 billion digital wallet program, a cash handout scheme to boost domestic demand, disbursed THB 145 billion to low-income and disabled groups in its first phase in September 2024. The second phase of transfers to 40 million elderly recipients was completed in January 2025, while the remaining phases were suspended, with about THB 157 billion approved for redirection to infrastructure, tourism promotion, human capital, and small and medium business loan schemes.

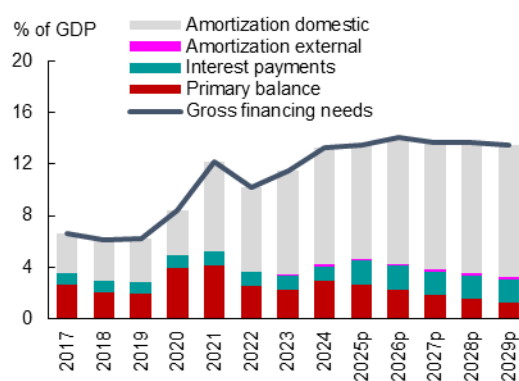
**13. Given continued fiscal expansion and subdued growth, public debt and gross financing needs are projected to rise further in the short term and remain elevated in the medium term, despite planned consolidation.**<sup>6</sup> Persistent sizable primary deficits, higher interest payments, and slower-than-expected economic growth have contributed to a substantial increase in the public debt-to-GDP ratio. The debt ratio rose to 63.2 percent in FY2024 and is projected to reach 65.6 percent in FY2025 and continue to rise to 69.1 percent in FY2028, just under the 70.0 percent ceiling. Gross financing needs are expected to increase from an average of 12.4 percent of GDP in FY2023–2024 to 13.6 on average between FY2025–2029, as the reduction in primary deficits under the authorities' medium-term fiscal consolidation plan is offset by increasing debt services. With the output gap continuing to be negative, albeit narrowing, the fiscal stance in FY2025-2026 is assessed to be neutral (Figure 10 to 12).<sup>7</sup>

Figure 11. Public Debt



Source: TMOF; AMRO staff projections

Figure 12. Gross Financing Needs



Source: TMOF; AMRO staff projections

**Authorities' views:** The authorities noted that a capital expenditure disbursement target of 80 percent was set for FY2025, with measures underway to streamline procurement and accelerate implementation, including the adoption of electronic bidding procedures. The Ministry of Finance (TMOF) expected FY2025 revenue performance to be supported by higher-than-planned SOE remittances, while green taxation measures are being developed for inclusion in the new Medium Term Fiscal Framework (MTFF) to be issued by end-2025.

#### A.4 Monetary Conditions and Financial Sector

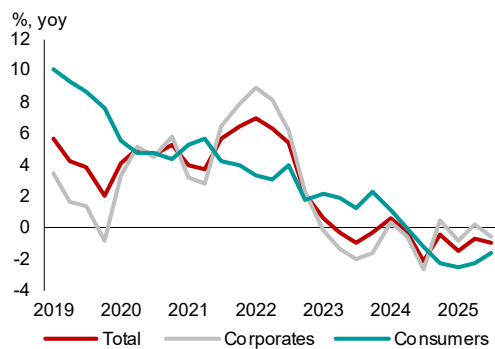
**14. Credit growth remained weak in first half of 2025 amid cautious lending, reflecting subdued credit demand—particularly among large corporations—amid economic uncertainty and cautious bank lending, with signs of rising credit risk.** As of Q3 2025, overall bank loan growth contracted by 1.0 percent year-on-year, (Figure 13) with only loans to large corporates registering positive growth at 0.7 percent year-on-year. In contrast, SME and consumer loan growth declined by 4.0 percent and

<sup>6</sup> Public debt in Thailand includes debt incurred by the Ministry of Finance, a state agency, or a state enterprise through raising of loans or debt guaranteed by the Ministry of Finance. It does not include debt of a state enterprise that conducts money lending business, asset management, or credit insurance business where such debt is not guaranteed by the Ministry of Finance, and a debt of the Bank of Thailand.

<sup>7</sup> The fiscal stance assessment is based on AMRO's projection. The neutral fiscal stance in FY2025-2026 reflects a higher allocation of government spending to debt repayment due to the rising public debt.

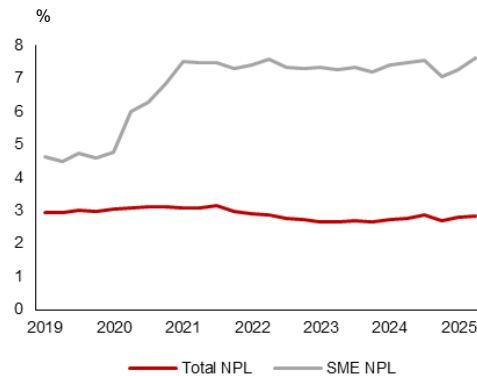
1.7 percent, respectively, as banks remained cautious due to weak income prospects and debt serviceability concerns. Corporate bond financing also contracted further by 1.5 percent year-on-year as of Q3 2025, mainly due to a drop in bond issuances in the high-yield segments. Elevated credit risk was reflected in a slight deterioration in asset quality. While the overall Non-performing Loan (NPL) remained relatively stable at 2.9 percent in Q2 2025, worsened credit quality is more pronounced in certain segments. In particular, SME NPLs rose to 7.6 percent, up from 6.9 percent as of end 2024 (Figure 14).<sup>8</sup> As bank lending tightened, retail borrowers increasingly turned to Specialized Financial Institutions (SFIs) for financing, partly due to financial assistance programs, resulting in stronger SFI loan growth of 3.0 percent year-on-year as of Q2 2025, compared to 2.4 percent a year earlier.

Figure 13. Bank Loan Growth



Source: CEIC, BOT  
Note: Commercial bank loans only

Figure 14. Asset Quality



Source: CEIC, BOT  
Note: Commercial bank loans only. Up until Q2 2025, SMEs are defined as businesses with a credit line of less than THB 500 million.

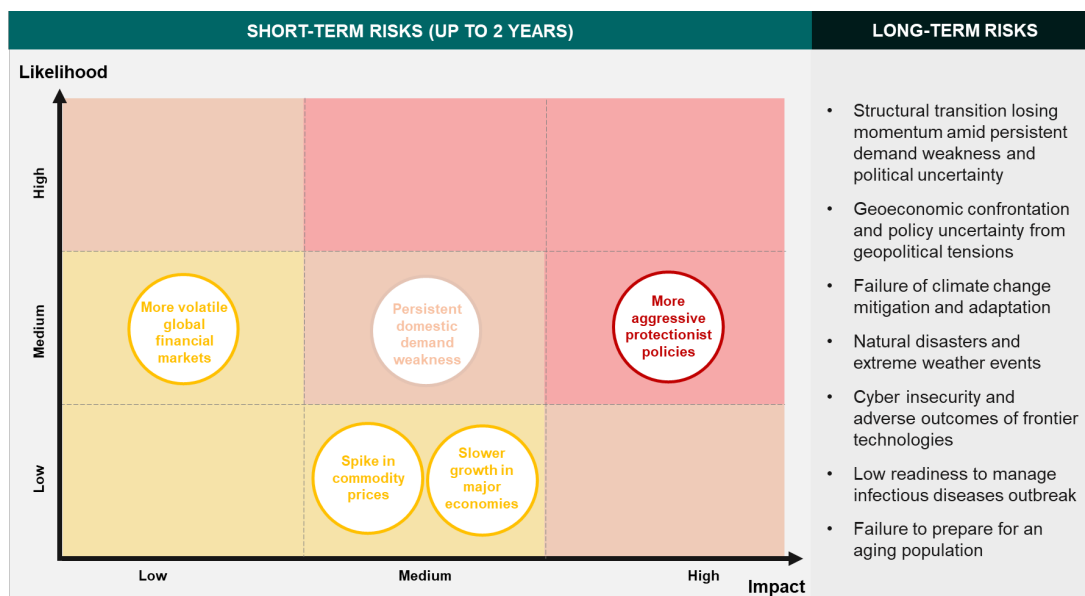
**15. However, banks have high levels of capital, liquidity, provisioning buffers, and stable profitability.** As of Q3 2025, banks' overall Capital Adequacy Ratio (CAR) and Liquidity Coverage Ratio (LCR) have remained over regulatory requirements at 21.3 percent and 204 percent, respectively. Loan loss provisions also remained sufficient, with the NPL coverage ratio of 179.8 percent. Banks' profitability also remained healthy compared to 2024. Recent interest rate cuts have led to lower interest income, reflected in a compressed Net Interest Margin, which declined to 2.7 percent from 3.0 percent a year earlier. Although net interest income declined by 10.7 percent, profitability remained stable due to higher non-interest income and investment gains.

<sup>8</sup> Starting from Q3 2025, the BOT's reported SME loan data reflect a revised definition for SMEs that incorporates both the firm's income size of its credit line. With this new definition, Q3 2025 SME NPLs and stage 2 loans registered 9.1 and 14.9 percent of total loans, respectively.

## B. Risks, Vulnerabilities, and Challenges

### *External Headwinds and Risk of Prolonged Domestic Demand Weakness Cloud Outlook*

Figure 15. Thailand: Country Risk Map



Source: AMRO staff

### B.1 Short-term Risks

**16. Overall, Thailand's short-term outlook remains tilted to the downside, with significant headwinds both externally and domestically.** External risks include the possibility of more aggressive US trade actions—such as new sectoral tariffs or new punitive measures—amid an unpredictable policy environment. Broader global conditions may also worsen, particularly if financial conditions tighten further or if major trading partners like the United States and China slow more sharply. A continued shortfall in tourist arrivals also clouds the services outlook. Domestic risks include persistently weak income growth, tight credit conditions, and elevated policy uncertainty, which could reinforce each other in a negative feedback loop, dampening household consumption, private investment, and overall demand. However, there is upside risk to growth if the current momentum in goods exports continues, the recent uptick in private investment leads to a sustained rebound, and if the recently approved stimulus package and pre-election spending provide additional short-term lift<sup>9</sup>.

<sup>9</sup> On October 7, 2025, the Thai Cabinet approved a THB 44 billion stimulus package to support domestic consumption, centered on a co-payment scheme expected to take effect from late October. Similar schemes in previous years were found to boost private consumption, particularly among lower-income groups, though estimates of the multiplier effect varied. While the new scheme could provide a short-term lift to demand, there remains uncertainty regarding the precise disbursement timeline and the extent to which it will materially affect growth within the year. At around 0.2% of GDP and funded within the existing FY2025 budget framework, the overall macro impact may be modest, though the scheme remains well-targeted and supportive of consumption during a soft patch in domestic demand. In parallel, pre-election spending ahead of the general election tentatively scheduled for February 2026 is expected to accelerate, particularly through frontloaded FY2026 budget disbursements aimed at bolstering public support.



**17. Externally, further downside risks to Thailand's baseline outlook remain through both the trade and tourism channels.** AMRO's baseline assumes the United States will proceed with the 19 percent headline tariff on Thai exports, per the revised reciprocal tariff it announced on 1 August 2025. After accounting for exempted products and additional sectoral tariffs, the effective weighted tariff remains high at around 20 percent. Risks are tilted to the downside—tariff coverage could broaden, new sectoral tariffs could be introduced, and other punitive measures remain possible given the unpredictability of US trade actions. About 18 percent of Thailand's exports are destined for the United States while in value-added terms, domestic final demand from the United States accounts for 6 percent of Thailand's total gross value added—highlighting Thailand's exposure to US trade actions. At the same time, a delayed recovery in inbound tourism—particularly from China—could weigh further on the services sector and overall growth. While currently contained, any further escalation of Thailand–Cambodia border tensions could also weigh on sentiment and the tourism outlook, while disrupting localized trade and labor-dependent sectors such as construction<sup>10</sup>.

**18. Domestically, the biggest risk is a potentially self-reinforcing downturn.** Weak income growth and confidence, tightened credit conditions, and ongoing political uncertainty could create a negative feedback loop that perpetuates domestic demand weakness. Sluggish growth continues constraining household income gains, while elevated household debt and restricted credit access further suppress consumption. Though the household debt-to-GDP ratio declined to 86.8 percent in Q2 2025, it remains high, limiting spending capacity. Simultaneously, credit standards have tightened in high credit risk segments,<sup>11</sup> constraining credit to key sectors—motor vehicles, construction, and SMEs—dampening investment and business activity. Persistent credit constraints may further erode borrower confidence and creditworthiness, deepening the slowdown. Should inflation expectations continue to weaken, the perceived increase in real debt burdens could further suppress consumption and investment, amplifying the adverse feedback loop. Political uncertainty compounds all the above pressures, weighing on investor sentiment and raising concerns over fiscal policy execution.

## B.2 Medium- to Long-term risks

**19. Risk to public debt sustainability remains salient.** Risks to public debt sustainability have increased, with larger fiscal deficits, weaker growth, and rising public debt straining Thailand's fiscal outlook. A prolonged period of subdued growth and persistent fiscal deficit could push the debt-to-GDP ratio above the 70 percent threshold, especially with shocks on GDP growth. Growing liabilities stemming from

<sup>10</sup> Thailand–Cambodia border trade reached THB 175.5 billion (~USD 5 billion) in 2024, with Thailand recording a THB 109 billion surplus. The Aranyaprathet checkpoint alone accounts for over 60 percent of bilateral border trade, and current closures may disrupt trade of up to THB 500 million (~USD 14 million) daily. Thailand also hosts an estimated 500,000–1 million Cambodian workers, many concentrated in agriculture and construction; for instance, they comprise over 80 percent of the agricultural labor force in Chanthaburi. In tourism, over 550,000 Cambodian visitors entered Thailand in 2024—modest nationally but significant for border provinces. Nevertheless, while any escalation in border tensions may cause localized disruptions, the overall bilateral economic relationship remains relatively limited—Cambodia accounts for about 1 percent of Thailand's total trade, 1.3 percent of total international arrivals, and roughly 1.2–2.4 percent of the Thai labor force.

<sup>11</sup> Bank of Thailand Credit Conditions Survey as of Q2 2025 showed banks have tightened credit standard for large corporates, SMEs, and all consumer loan segments, with 'general economy' and 'credit worthiness' as the main influencing factors.



ongoing quasi-fiscal operations—government commitments outside the annual budget—are an added concern.<sup>12</sup> While Thailand continues to benefit from a deep and liquid domestic bond market and a track record of fiscal discipline that supports investor confidence, the absence of firm consolidation measures could elevate long-term debt risks and erode fiscal space for future countercyclical policy.

**20. But there is an upside risk to long-term growth if bold and strategic actions are taken to reinforce and expedite the structural transition process, enabling Thailand to reap greater growth benefits.** With such actions, the shift toward emerging sectors driven in part by FDI—such as electric vehicles, digital infrastructure, and electronics manufacturing—could gain strong momentum, enhancing the economy’s ability to secure sustained competitiveness in a rapidly evolving global economy. However, these inflows will not automatically translate into productivity spillovers or broader benefits for the domestic economy. Realizing this upside risk will depend on proactive efforts to maximize linkages with local firms, strengthen human capital, and align industrial and innovation policies to capture value added along the supply chain. A stable macroeconomic environment, clear policy direction, and effective execution of supporting reforms, including infrastructure upgrades and workforce reskilling, could accelerate this transition, reduce reliance on traditional sectors facing long-term decline, and enable Thailand to capture opportunities in high-value areas.

**Authorities’ views:** The authorities noted that Thailand’s sovereign credit assessments remain mixed across rating agencies, reflecting concerns on growth and fiscal pressures, but the medium-term fiscal framework addresses these risks through strengthened fiscal rules, clearer deficit-reduction paths, and improved transparency and thus support medium-term fiscal sustainability and reinforce confidence.

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<sup>12</sup> Quasi-fiscal operations are mainly directed toward support programs for farmers, SMEs, and low-income groups. As of end-FY2024, the stock stood at 5.6 percent of GDP, of which 1 percent of GDP is recorded as public debt, while the remainder will be gradually repaid through future budget allocations.

## C. Policy Discussion and Recommendations

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### *Supporting Near-term Growth, Sustaining Longer-term Resilience and Transformation*

**21. Overall, AMRO supports the authorities' gradual monetary easing and targeted fiscal measures to support near-term growth.** Given weak domestic demand, subdued inflation, and mounting headwinds, the appropriate policy mix is for monetary policy to provide broad-based support in the near term, while fiscal policy focuses on targeted growth support and remains on a consolidation path over the medium term. Should Thailand's domestic demand weakness turn out deeper or more prolonged than anticipated, a stronger policy response would be warranted.

**22. Monetary policy remains appropriately supportive amid weakening private sector momentum and mounting uncertainty.** BOT has cut its policy rate three times this year amid slowing private sector momentum and weak inflation. AMRO supports the authorities' gradual easing to support growth, as the current stance remains broadly appropriate given subdued domestic demand and rising external headwinds. Meanwhile, BOT's emphasis on the timing and effectiveness of policy adjustments amid elevated uncertainty is well founded: in an environment marked by multiple, evolving shocks, the value of retaining flexibility and responding decisively when needed is critical. Overall, the current stance—particularly the gradual easing in recent period—remains consistent with an economy operating below potential, subdued inflation expectations, and the need to safeguard macro-financial stability while maintaining room to maneuver.

**23. Looking ahead, there is room for monetary policy to ease further should downside risks materialize more clearly.** If economic growth continues to underperform baseline expectations and inflation remains below target, there is scope for BOT to lower the policy rate. AMRO staff's latest estimates suggest that Thailand's current real interest rate is still above the estimated neutral rate—even after factoring in credit conditions. In such a context, a more accommodative stance could help cushion domestic demand, particularly if external headwinds persist or household spending weakens further. AMRO analysis also suggests that if the weakness in private sector demand is assessed to be persistent, there is a case for frontloading necessary easing to avoid a scenario where prolonged subdued conditions reduce the effectiveness of future policy action (*See Selected Issue 1: Monetary Policy under High Uncertainty: A Scenario-Based Approach for Thailand*).

**24. Financial sector policy should strike a balance between managing legacy debt vulnerabilities and supporting new productive credit.** While headline indicators, such as the Bank for International Settlements' credit gap which has turned negative since Q3 2024, suggest that credit growth has slowed below its long-term trend, many households and SMEs continue to face debt servicing challenges amid sluggish income growth. Ongoing efforts to restructure or reschedule distressed legacy loans remain important to mitigate financial stability risks and reduce debt overhang.<sup>13</sup>

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<sup>13</sup> Troubled debtors have continued to enroll in debt restructuring programs under the Responsible Lending measures as well as the 'Khun Soo Rao Chuay' initiative. In particular, under the 'Khun Soo Rao Chuay' initiative as of August 25,

At the same time, it is equally critical to preserve space for healthy credit expansion, particularly to finance new investments and support structural transformation.

**25. To complement these efforts, the authorities should continue the implementation of other measures to support the flow of financing into high-potential areas.** These could include concessional lending programs for SMEs implemented in coordination with SFIs, as well as the ongoing effort to revamp the credit guarantee mechanism by establishing a National Credit Guarantee Agency (NaCGA) aimed at providing based guarantees tailored to each borrower (See Box A: *Revamping of the Credit Guarantee Scheme*). The planned introduction of virtual banks by mid-2026 also offers an opportunity to expand credit to SMEs and underserved retail borrowers. While the planned establishment of asset management companies to purchase bad debt could enhance lending capacity, such schemes could pose moral-hazard risks, potentially weakening banks' credit risk management incentives. Further clarity on their design is needed, especially regarding how risks and incentives will be shared. Collectively, such measures could help unlock private investment in emerging sectors and strengthen the transmission of accommodative monetary and fiscal policy, while containing risks of moral hazard through careful design and targeting.

**Authorities' views:** The authorities broadly agree with AMRO's policy assessment and recommendations. BOT emphasized that the current policy rate of 1.5 percent is already low by historical standards and cautioned about the limited policy space for the future. Although financial conditions may appear restrictive, funding costs for large firms remain accommodative, while SME lending continues to contract due to elevated credit risk and weak demand. BOT stressed that monetary policy alone cannot revive domestic demand and that further easing risks unproductive lending. Instead, the priority should be on targeted financial measures—such as soft loans and credit guarantees—to address credit access constraints, particularly for SMEs, where the key issue is not pricing, but access.

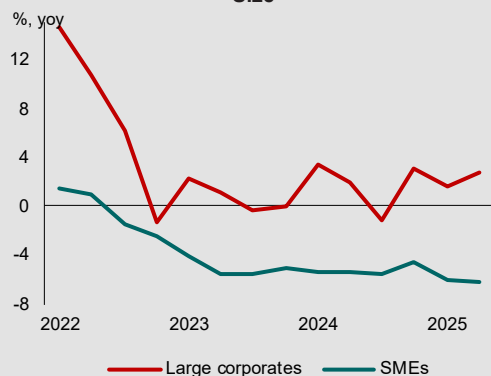
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2025, 1.7 million debtors had registered. As of August 15, 2025, the total registered debt eligible for restructuring amounts to THB 550 billion, representing 46 percent of total eligible debt.

**Box A. Revamping of the credit guarantee scheme<sup>14</sup>**

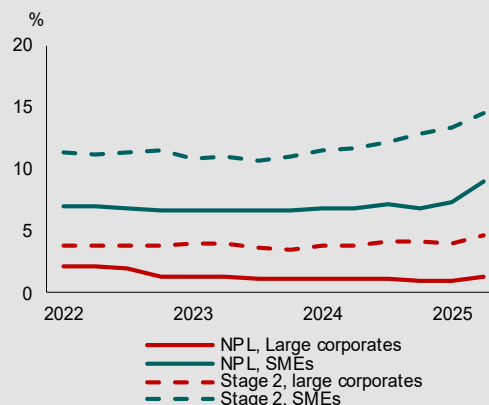
**Thai SMEs' access to finance has been contracting since mid-2022.** Although SMEs account for a substantial share of employment and GDP,<sup>15</sup> SME lending has continued to contract since mid-2022 (Figure A1). The key constraint lies in the elevated credit risk given the subdued economy which has affected smaller businesses in particular. As of Q2 2025, SME non-performing loans stood at 7.6 percent, while stage 2 loans exceeded 13 percent (Figure A2), both markedly higher than for larger corporates.<sup>16</sup> At the same time, SME lending yields returns of around 8-10 percent while total costs make up around 11-13 percent, driven largely by high credit costs.<sup>17</sup> This negative risk-return profile continues to discourage banks from expanding SME lending. With fewer than half of SMEs having access to bank credit, authorities have recognized the need to revamp the credit guarantee system to better channel credit to viable firms, particularly SMEs.

**Thailand's existing credit guarantee scheme remains constrained due to design limitations.** The current scheme has been administered by the Thai Credit Guarantee Corporation (TCG) since 1991, the scheme has sought to mitigate credit risk through a 30:70 loss-sharing ratio under the Portfolio Guarantee Scheme, with TCG absorbing 30 percent of default losses in return for an average fee of about 1.75 percent. However, uptake has been somewhat limited due to eligibility criteria, the absence of risk differentiation among borrowers, and heavy reliance on government funding, which makes the scheme dependent on annual government budget allocations and vulnerable to fiscal constraints.

**Figure A1. Corporate Loan Growth, by Business Size**

Source: National authorities

Note: As of Q2 2025. SMEs defined as businesses with a credit line of less than THB 500 million

**Figure A2. Loan Quality, by Business Size**

Source: National authorities

Note: Commercial bank loans only. As of Q2 2025. SMEs defined as businesses with a credit line of less than THB 500 million

**The establishment of the National Credit Guarantee Agency (NaCGA) marks a major reform in the credit guarantee scheme.** Approved by the Thai cabinet in August 2025, NaCGA will operate as a single agency, incorporating TCG under it and falling under the oversight of the Ministry of Finance and Bank of Thailand. Unlike the portfolio-based approach of TCG, NaCGA will allow SMEs to apply directly for credit guarantee certificates before approaching financial institutions for loans. This shift is expected to streamline procedures, expand coverage to non-bank lenders and bond issuers, and minimize adverse selection by banks. Importantly, NaCGA will employ a risk-based pricing approach, with guarantee fees calibrated to each borrower's creditworthiness. Another improvement lies in its funding structure, which blends government support with private-sector contributions. Capitalization will be anchored by government budget allocations, but will also be complemented by annual contributions from banks and Specialized Financial Institutions, proportional to their business loan portfolios. The borrowers themselves will also pay a risk-based guarantee fee.

**This new structure mirrors successful peers across the region** (Table A1). Like Korea's KODIT and KOTEC, which combines public capital with mandatory bank contributions, and

Malaysia's CGCMB, which blends public ownership with commercial bank participation, NaCGA's mixed funding model aims to reduce fiscal dependence and better align stakeholder incentives. The shift to individual guarantees also aligns with regional trends, as seen in Japan and Korea, and contrasts with Thailand's legacy reliance on portfolio guarantees under TCG. Additionally, the adoption of risk-based pricing follows the practices of Japan, Korea, and Malaysia, which differentiate guarantee fees by borrower risk to ensure fairness. Moreover, the expansion of NaCGA's scope to cover non-bank loans and bond products reflects innovations in peers, where guarantees have extended beyond traditional bank lending. These parallels suggest that Thailand is positioning NaCGA in line with proven international models, while tailoring it to the needs of local SMEs.

**Once implemented, NaCGA could significantly expand SME access to finance while creating a more sustainable and resilient guarantee framework.** By aligning with best practices—partial coverage, risk-based pricing, diversified funding, and prudent leverage ratios—the new agency can balance financial inclusion with fiscal stability. Its success, however, will depend on securing strong governance, credible risk management, and active buy-in from financial institutions, which are both contributors to its capital base and critical partners in extending credit to SMEs. At the same time, greater access to finance must be accompanied by efforts to formalize and modernize SMEs through digital adoption, skills upgrading, and business process improvements, so that firms can boost productivity, strengthen competitiveness and gradually reduce reliance on credit guarantees. Taken together, these measures will enable NaCGA to not only broaden credit access but also support the transformation of Thai SMEs into more innovative and resilient drivers of long-term growth.

**Table A1. Thailand and Selected ASEAN+3 economies' Credit Guarantee Schemes**

Feature	Thailand		Selected ASEAN+3 economies		
	TCG	NaCGA	Japan	Korea	Malaysia
<b>Guarantee mechanism</b>	Portfolio guarantee	Individual guarantee	Individual guarantee	Individual guarantee	Individual guarantee
<b>Targeted segment</b>	SMEs	SMEs	MSMEs	MSMEs, Tech SMEs	MSMEs
<b>Coverage</b>	30% (under PGS 11)	To be set	80-100%	70-85%	50-100%
<b>Risk pricing</b>	Blanket fee	Risk-based	Risk-based fee bands	Risk-based	Risk-based
<b>Average fees</b>	1.75%	N/A	0.45%-2.2%	0.5%-3%	0.5%-4%
<b>Scope</b>	Loans by banks and their subsidiaries	Bank, SFI, and non-bank loans; bond products	Bank loans, privately placed bonds	Bank loans, bond products	Bank loans, bond products
<b>Maximum leverage<sup>18</sup></b>	10x equity	To be set	6x capital funds	20x capital funds (KODIT); 20x net asset (KOTEC)	6x reserves
<b>Funding</b>	Public; reliant on annual government budget	Public funding, fees, contributions from banks and SFIs	Public funding, fees	Public capital funding, fees, private bank contributions	Public capital funding, fees, private bank contributions

<sup>14</sup> Prepared by Benyaporn Chantana

<sup>15</sup> According to the Office of SME Promotion, Thai SMEs account for 68.8 percent of private employment and 34.9 percent of GDP in 2024.

<sup>16</sup> Starting from Q3 2025, the BOT's reported SME loan data reflect a revised definition for SMEs that incorporates both the firm's income size of its credit line. With this new definition, Q3 2025 SME NPLs and stage 2 loans registered 9.1 and 14.9 percent of total loans, respectively.

<sup>17</sup> According to BOT, SME loans generate returns of about 8.0–10.0 percent while the cost of extending loans to small SMEs is about 11.0–13.0 percent (comprising 2.0–3.0 percent in funding costs, 2.0–3.0 percent in operating expense, and 6.0–8.0 percent in credit cost)

<sup>18</sup> Ratio of total outstanding guarantees to the size of the guarantee fund, an indicator of usage intensity of guarantee schemes.

<b>Governance</b>	Public agency under MOF & BOT oversight	Public agency under MOF & BOT oversight	Local and national Government	Government and regulatory bodies	Central bank and banks as shareholders
<b>Other operations</b>	Consulting services	To be determined	-	Consulting services, technology appraisal and valuations, etc.	Direct lending, securitization, consulting services, etc.
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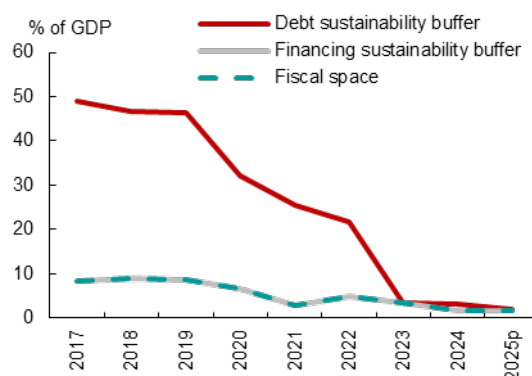
**26. Fiscal policy should remain supportive of growth given the elevated downside risks to growth.** In the near term, targeted fiscal policy may be needed to sustain domestic demand if private sector momentum continues to soften. This is especially the case if domestic demand weakness persists, in which case fiscal support will be particularly important for vulnerable groups such as low-income households and SMEs. The recent shift in the digital wallet scheme toward infrastructure spending and productivity-enhancing investments is welcome and should be implemented in a timely and efficient manner to support short-term growth and enhance long-term competitiveness. While AMRO commends the authorities’ fiscal prudence and institutional strength, which anchor investor confidence, maintaining readiness to deploy targeted, temporary measures is crucial should downside risks to growth arise. Strengthening the execution of public investment, particularly in important infrastructure projects with higher multiplier effects is recommended (See *Box B: Thailand’s Capital Expenditure Disbursement Delay – An Assessment*). Timely disbursement would help sustain the momentum in public investment observed in the first half of 2025, which has helped to partially offset slowing private consumption and private investment.

**27. At the same time, the authorities are encouraged to continue pursuing medium-term fiscal consolidation to rebuild fiscal space.**<sup>19</sup> While short-term fiscal support may be warranted to buffer near-term risks, Thailand faces a challenging medium-term outlook marked by demographic headwinds, rising structural spending needs on social protection and workforce upskilling, and the growing urgency to invest

<sup>19</sup> Fiscal space is defined as the government’s capacity to conduct discretionary fiscal policy without endangering debt sustainability or breaching financing constraints. It is quantified as the maximum fiscal stimulus that would not raise the debt-to-GDP and GFN-to-GDP ratios above their respective thresholds of 70 percent and 15 percent. AMRO assesses fiscal space using both qualitative and quantitative methods. See AMRO’s 2023 Annual Consultation Report on Thailand (Selected Issue: Assessment of Thailand’s Fiscal Space) for details on AMRO’s approach. AMRO assessed that Thailand’s fiscal space has continued to decline due to delays in fiscal consolidation, elevated public debt, and slower than-expected-growth. Fiscal space averaged 9.0 percent of GDP during FY2016–2019 but declined to 4.4 percent during FY2020–2023. It is estimated at 1.7 percent of GDP in FY2024 and projected to decrease further to 1.6 percent in FY2025.

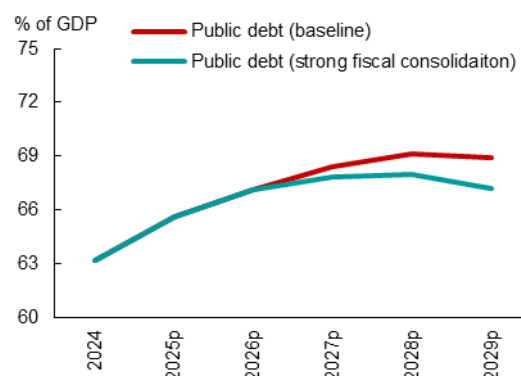
in long-term development. Over the medium to longer term, rising public debt—combined with risks of recurring global and domestic shocks that may require future fiscal interventions—could limit room for maneuver if left unaddressed (Figure 13). Although the MTFE is updated annually to align the pace and scale of consolidation with economic and social priorities, the recent increase in public debt underscores the importance of setting a more ambitious fiscal consolidation path without weighing on economic activity. An alternative path, which can be achieved for example through selected tax reform measures,<sup>20</sup> could lower the primary deficit to 1.0 percent of GDP in FY2027–2029, 0.5 percentage points below the baseline. This would allow public debt to peak at 68.0 percent of GDP in FY2028 instead of 69.1 percent under the baseline and decline more rapidly to an average of 68 percent over FY2027–2029, compared to 69 percent over the same period under the baseline (Figure 14 and *Annex 3: Debt Sustainability Analysis*).

**Figure 16. Fiscal Space**



Source: TMOF; AMRO staff projections

**Figure 17. Public Debt under Stronger Fiscal Consolidation**



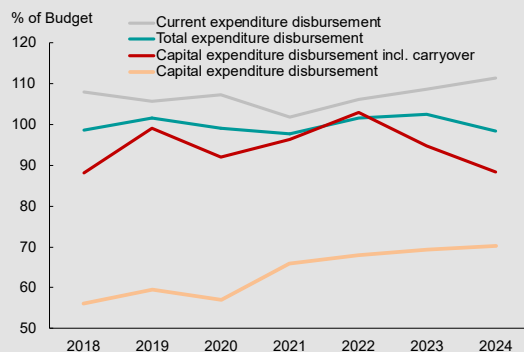
Source: TMOF; AMRO staff projections

<sup>20</sup> For example, reforming value-added tax exemptions could increase revenue by 0.6 percent of GDP annually, and streamlining personal income tax exemptions, most of which benefit high-income groups, could yield 0.5 percent.

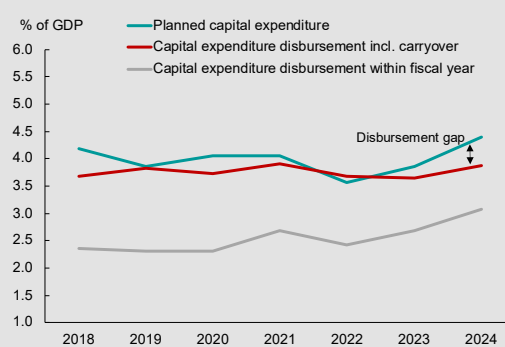


**Box B. Thailand's Capital Expenditure Disbursement Delay – An Assessment<sup>21</sup>**

**Thailand's capital expenditure disbursement has been short of planned allocations, reflecting recurring implementation challenges.** Between 2018 and 2024, total capital disbursement including carryovers averaged above 90 percent of the capital budget, while in-year execution was only at around 60–70 percent (Figure B1). The gap between planned and actual capital disbursement has been a consistent feature across years (Figure B2). The larger FY2024 gap was driven by an idiosyncratic budget delay given political transition. These recurring shortfalls point to possible structural weakness in project implementation that have persisted despite efforts to scale up public investment in recent years.

**Figure B1. Disbursement of Current, Capital, and Total Expenditure Relative to Budget**

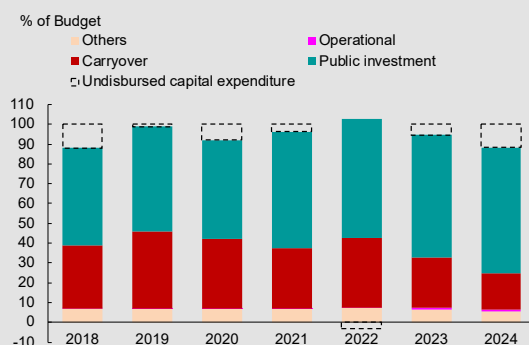
Source: National authorities via CEIC; AMRO staff estimates  
Note: Disbursement-to-budget ratio may exceed 100 percent when carry-over funds or supplementary budgets were not reflected in the original appropriations.

**Figure B2. Planned and Actual Capital Expenditure to GDP**

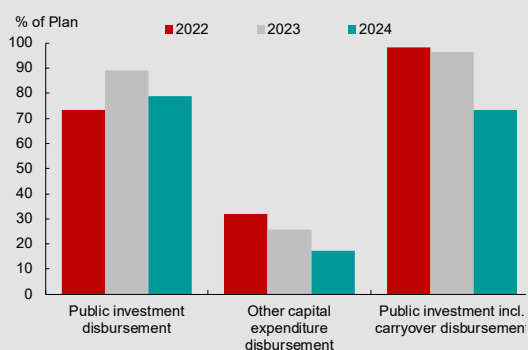
Source: National authorities via CEIC; AMRO staff estimates

Note: If funds cannot be drawn by fiscal year-end on a legally binding commitment, the appropriation may be reserved as carryover and disbursed within the next 6–12 months of the new fiscal year.

**Disbursement delays are concentrated in major public investment projects, particularly in the energy, utilities, and transport sectors.** Capital expenditure comprises public investment projects, operational and other capital spending, as well as carryovers, with execution delays mainly observed in the public investment component (Figures B3 and B4). Within this category, shortfalls have been most pronounced in energy and utilities, where large electricity, waterworks, and energy projects recorded disbursement gaps of around 25–40 percent of planned budgets. Transportation-related capital expenditure such as projects under the Expressway Authority of Thailand also recorded shortfalls of around 40 percent (Figures B5 and B6).

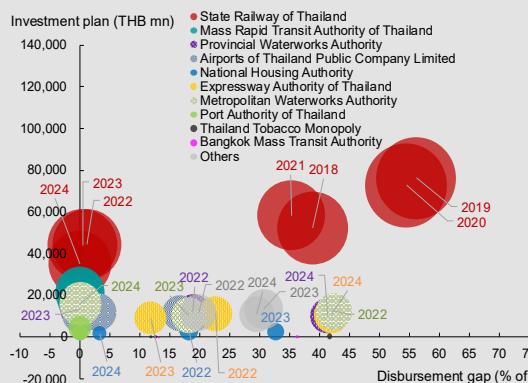
**Figure B3. Capital Expenditure Disbursement by Component**

Source: National authorities via CEIC; AMRO staff estimates  
Note: Public investment comprises direct capital spending and subsidies, and spans both fiscal- and calendar-year cycles.

**Figure B4. Public Investment Disbursement vs. Annual Budget Plan**

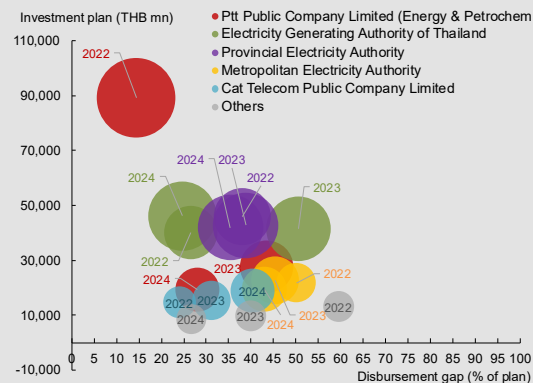
Source: National authorities via CEIC; AMRO staff estimates

**Figure B5. Fiscal-Year Public Investment Plans and Disbursement Gaps**



Source: National authorities via CEIC; AMRO staff estimates  
Note: Bubble size reflects each agency's investment plan as a share of the total annual public investment budget.

**Figure B6. Calendar-Year Public Investment Plans and Disbursement Gaps**



Source: National authorities via CEIC; AMRO staff estimates  
Note: Bubble size reflects each agency's investment plan as a share of the total annual public investment budget.

**Strengthening public investment management is important for addressing recurring disbursement delays and enhancing investment efficiency.** Persistent shortfalls could stem from insufficient project readiness, such as delays in obtaining required permits, along with rigid procurement procedures and misaligned implementation timelines between agencies. Enhancing project readiness, procurement processes, and inter-agency coordination could help narrow in-year execution gaps. Continued implementation of Thailand's Public Investment Management Assessment (PIMA) recommendations, particularly in project appraisal, selection, and risk oversight, would support more timely, high-return infrastructure projects that enhance the growth impact of public investment (OECD 2019). Additionally, developing a multi-year public investment pipeline and improving its linkages with the medium-term expenditure framework and annual budgeting would improve planning and allocation.

**Further analysis would be needed to enhance policy recommendations.** The analysis in this Box is based on aggregate disbursement data and limited agency-level information. Further analysis of project-level readiness, procurement process mapping, and institutional capacity is needed to enhance policy recommendations. Specifically, deeper diagnostics - including project-pipeline audits, time-and-motion studies of procurement, cohort analysis of carryovers, and interviews with line agencies and oversight bodies - are needed to quantify bottlenecks, prioritize reforms, and design a sequenced implementation plan.

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<sup>21</sup> Prepared by Ravisara Hataiseree

**28. To ensure the sustainability of public finances, fiscal consolidation should be anchored in a credible medium-term framework and supported by concrete reforms.** Despite a gradual recovery, the revenue-to-GDP ratio remains below pre-pandemic levels. The planned tax reform agenda, which is said to combine immediate revenue measures with longer-term structural reforms to strengthen the revenue base, enhance fiscal discipline and promote socioeconomic equity, is welcome. Revenue reforms should be accompanied by targeted financial support for affected low-income groups and by leveraging the existing electronic tax system to enhance compliance and broaden the tax base, particularly in the informal sector. AMRO recommends its prompt finalization and implementation to achieve the intended outcomes.<sup>22</sup>

**29. These revenue enhancement efforts should be complemented by a thorough expenditure review.** The goal of the review is to achieve fiscal consolidation and preserve essential investments in education, healthcare, innovation, infrastructure, and social protection systems that are needed to address Thailand's longer-term structural challenges. Better targeting and rationalization of subsidies, along with enhanced oversight of quasi-fiscal operations while limiting their use, will be imperative to improve fiscal accountability. Together, these reforms would help narrow the fiscal deficit, maintain public debt at prudent levels, and rebuild sufficient fiscal buffers to address shocks while preserving space for priority development spending and preparing for emerging risks.

**30. Over the longer term, Thailand should shift its focus from short-term support to revitalizing domestic structural transformation, which is essential for it to break out of the low-growth trap and secure higher potential growth.** Thailand's long-term growth prospects hinge on revitalizing structural transformation to lift total factor productivity, thereby securing higher potential growth. This demands reforms in innovation, human capital, and infrastructure—and above all stronger execution of existing plans—by aligning policies and investments to upgrade transport, digital, and energy infrastructure; strengthening education and training to meet evolving skill needs; and supporting sectoral transformation through innovation, R&D, and deeper SME integration into global value chains<sup>23</sup>.

**31. In this regard, Thailand should leverage FDI—and maximize its spillovers—to drive domestic structural transformation.** Beyond sustaining ongoing inflows into the automotive, electronics manufacturing and digital services, the priority is to ensure these investments translate into higher, sustainable productivity and potential growth for the Thai economy. This requires a proactive agenda to generate domestic value added from FDI: foster human-capital upskilling, strengthen technological and innovation capacity, and deepen linkages with domestic firms. With this, FDI becomes not only capital but a catalyst to upgrade Thailand's industrial capacity and support more inclusive growth, anchoring its role as a regional automotive hub, expanding its

<sup>22</sup> AMRO staff analysis suggests that Thailand requires additional spending of about 2.9 percent of GDP annually, covering infrastructure, social protection, and climate change adaptation, which could be financed by revenue reforms estimated to generate around 3.0 percent of GDP through VAT exemption reforms, streamlined personal income tax exemptions, an expanded personal income tax base, improved property tax collection, and a global minimum tax. (See AMRO's 2024 Annual Consultation Report on Thailand)

<sup>23</sup> See AMRO's 2024 Annual Consultation Report on Thailand (Selected Issue: Thailand's Long-Term Growth Potential – The Case for Reform) and the AREO 2024 for detailed analysis on Thailand's sectoral resource misallocation and implications on productivity and potential growth, and specific structural policy recommendations for Thailand in the former, and broader policy imperatives within the context of the ASEAN+3 region in the latter.

existing electronics manufacturing clusters to segments tied to growth of artificial adoption, and strengthening its position in digital services. This ultimately enhances Thailand's overall global competitiveness. Policy should also encourage FDI in secondary cities to support more balanced regional growth across the country.

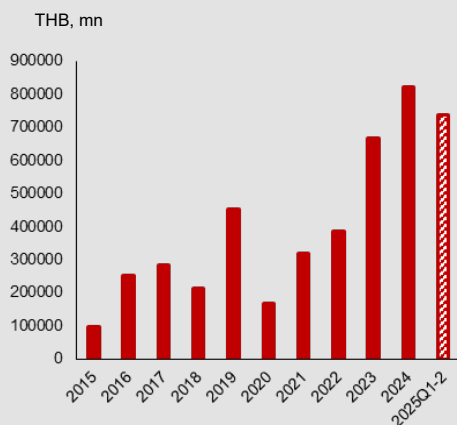
**Authorities' views:** On revenue reform, TMOF highlighted the establishment of the Revenue Reform Committee in December 2024, supported by subcommittees tasked with developing medium- to long-term measures. The reform agenda is being implemented in phases, with near-term priority given to initiatives that can be undertaken within existing administrative and legal frameworks, such as expanding electronic tax systems to improve compliance and strengthening revenue collection. On long-term growth prospects, the authorities emphasized that given Thailand's moderate growth and the ongoing search for new growth engine, public investment remains important. At the same time, stronger private investment is needed to sustain momentum. The authorities also concurred that Thailand's high degree of openness and strong integration into supply chain remain key strengths in attracting FDI.

**Box C. Maximizing FDI Spillovers for Thailand's Structural Transformation<sup>24</sup>**

**Thailand is seeing a surge of FDI inflows into emerging sectors amid its structural shifts.**

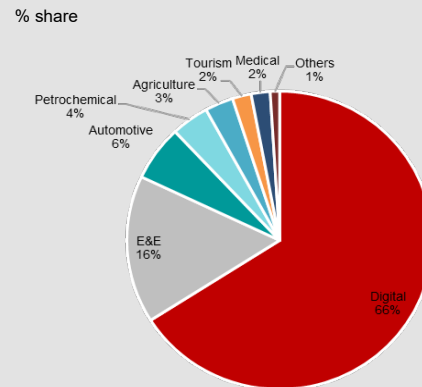
In the first half of 2025, Thailand attracted a record-breaking THB 1.06 trillion (USD 32.5 billion) in investment applications to the Board of Investment—a 140 percent increase year-on-year, and the strongest half-year performance on record (Figure C1). Foreign investors accounted for 70 percent of the total value, led by China and Japan. This wave of FDI marks an important transition, with digital infrastructure, advanced electronics, and green technologies increasingly occupying the investment pipeline. Digital-related projects alone made up nearly half of the total investment value, reflecting growing investor confidence in Thailand's role as a hub for emerging industries (Figure C2).

**Figure C1. Applications for Investment Promotion, 2015–1H 2025**



Source: Board of Investment.

**Figure C2. Investment Applications by Sector, 1H 2025**



Source: Board of Investment.

Note: The share is based on the values of investment applications.

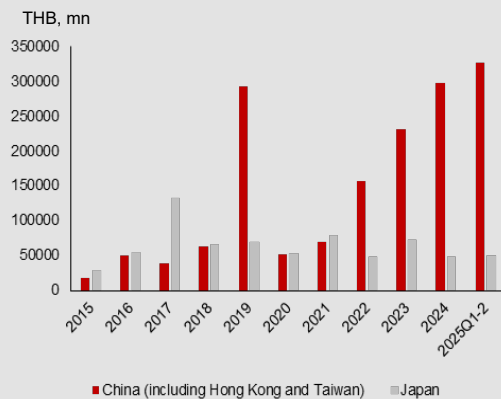
**However, spillovers from these FDI inflows are not always automatic.** Existing literature consistently shows that productivity gains from foreign investment are neither uniform nor guaranteed, as they depend critically on a host economy's absorptive capacity (OECD 2023). Key factors such as high human capital, trade openness, institutional quality, and financial development are essential to harnessing these benefits (Borensztein and others 1998; Li and Liu 2005; Blalock and Gertler 2008).

**Thailand faces several key constraints in fully capturing the spillovers from these inflows.** While investments in areas like data centers and EV assembly are promising catalysts for future growth, these are nascent sectors for which Thailand lacks an established ecosystem to readily absorb spillovers. This challenge is compounded by other structural constraints, including a shortage of high-skilled labor (OECD 2025) and the limited capacity of SMEs, which constitute 99.5 percent of firms but are largely excluded from FDI supply chains.

**Thailand's success with automotive FDI in the 1980s and 1990s demonstrates how targeted policy can unlock transformative spillovers.** The government's phased local content requirements, which escalated from 25–50 percent with clear timelines and specified components, provided the certainty needed for long-term investment. This policy was

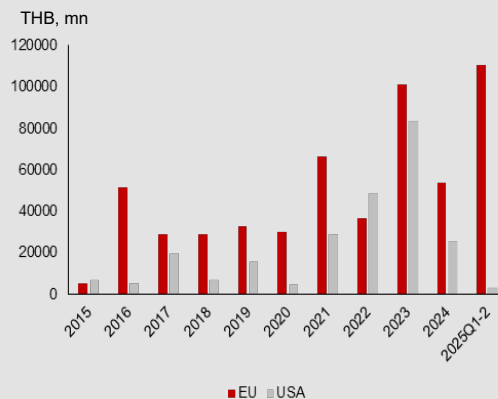
reinforced by robust institutional support, including the Thailand Automotive Institute for technical training and the BUILD program (Unit for Industrial Linkage Development), which actively forged connections between foreign assemblers and local suppliers. This coordinated approach fostered a self-reinforcing ecosystem where Japanese firms established local R&D centers and training programs. The result was deep economic embedding: Japanese automakers achieved over 90 percent local sourcing, nurturing a network of more than 2,300 domestic auto-parts suppliers (World Bank 2016).

**Figure C3. China and Japan: Applications for Investment Promotion, 2015–1H 2025**



Source: Board of Investment.

**Figure C4. EU and US: Applications for Investment Promotion, 2015–1H 2025**



Source: Board of Investment.

**To maximize the spillovers of a new generation of FDI in Thailand’s evolving investment landscape—marked by changing industries and shifting FDI source countries (Figure C3 and C4)—four priority areas for policy could be explored:**

**Target the “right” type of FDI.** Capital-intensive investments in EVs and data centers could enable the future development of Thailand’s digital ecosystem. Nonetheless, it is important to prioritize FDIs that can provide knowledge-intensive or technological spillovers to local industries. Incentives should be enhanced for R&D centers and regional headquarters that commit to concrete technology transfer, moving up the value chain as demonstrated in the automotive sector. In parallel, incentives or regulatory conditions—such as local content or training requirements—could be considered to ensure that FDI yields concrete spillovers.

**Strengthen absorptive capacity.** Thailand’s specific skills shortages in digital and green technologies can be addressed through demand-driven vocational training. Scaling up models like Work-integrated Learning is critical, as the returns to FDI are empirically found to be conditional on a minimum threshold of human capital (Borensztein and others 1998). Support for SME technology adoption should also be expanded.

**Actively facilitate backward linkages.** Thailand’s proven model of active intermediation, exemplified by the BUILD program, can be reconsidered and expanded to new sectors. Supplier development programs can be designed to close the gap between local capabilities and international procurement standards, and tax incentives should be offered to foreign

<sup>24</sup> Prepared by Yuhong Wu and Haobin Wang.

firms that demonstrate meaningful local procurement, as backward linkages yield the strongest spillover effects (Javorcik 2004).

**Pursue selective liberalization in enabling services.** The Eastern Economic Corridor can be considered as a regulatory sandbox to pilot reforms in logistics and digital services. Such liberalization is key to maximizing spillovers from manufacturing FDI embedded in global value chains, supported by a conducive ecosystem of transparent regulations and competition policy.

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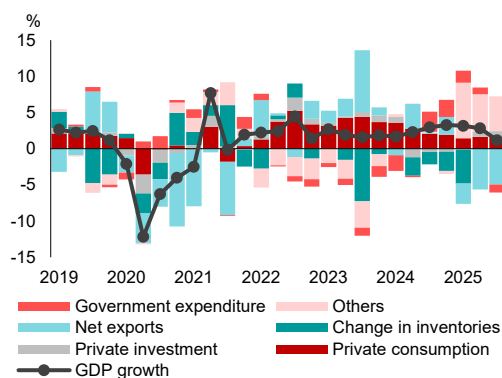


## Appendices

### Appendix 1. Selected Figures for Major Economic Indicators

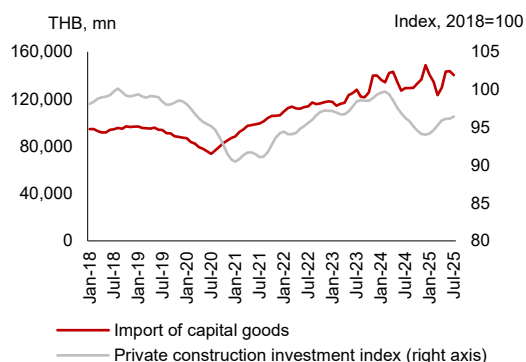
**Figure 1.1. Real Sector**

Thailand's private consumption growth has continued to decline, dragging overall growth.



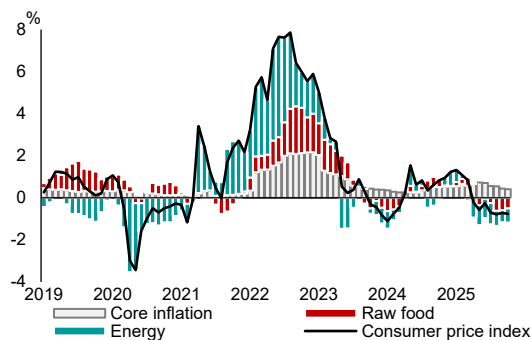
Source: Office of the National Economic and Social Development Council

Resilient growth in import of capital goods is consistent with the rebound in private investment in Q2 and Q3 2025.



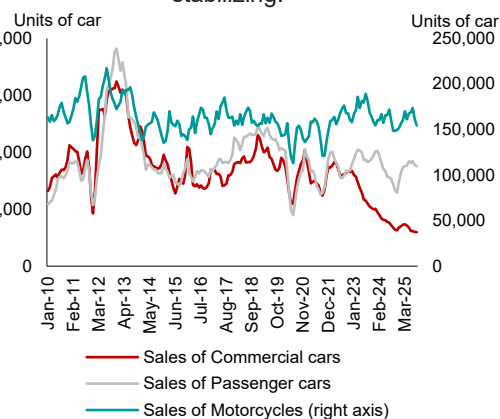
Source: BOT

Headline inflation fell into negative territory in recent months mainly due to falling energy prices.



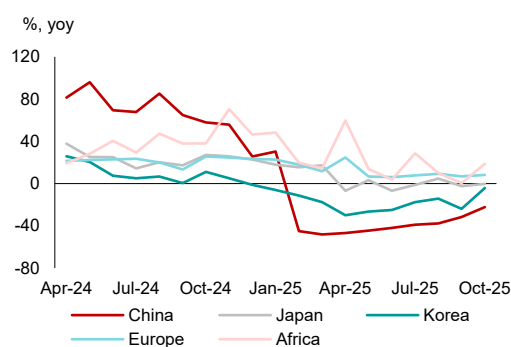
Source: National authorities via CEIC

Auto sales rebounded in Q2 2025, suggesting the price war may be easing and market conditions stabilizing.



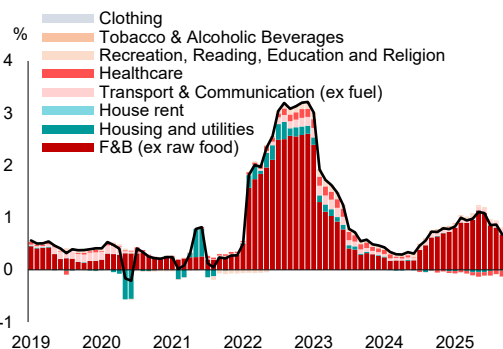
Source: BOT; AMRO staff calculation.

Chinese tourist arrivals have fallen sharply, but a rising share of long-haul travelers lifted per-capita spending, partially offsetting the decline.



Source: National authorities via CEIC

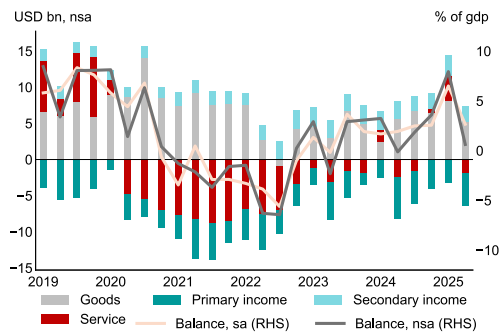
Core inflation has inched upward since mid-2024 driven by rising food and beverage prices.



Source: National authorities via CEIC

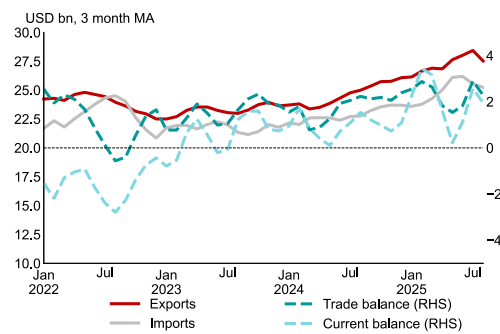
**Figure 1.2. External Sector**

The current account, which was strong in Q1 2025 due to a strong goods and services trade surplus, has softened.



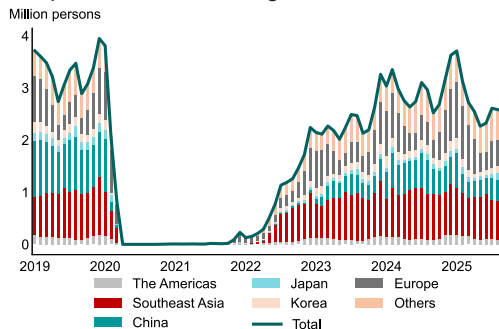
Source: National authorities via CEIC; AMRO staff calculations.

Both exports and imports softened entering into 2H 2025.



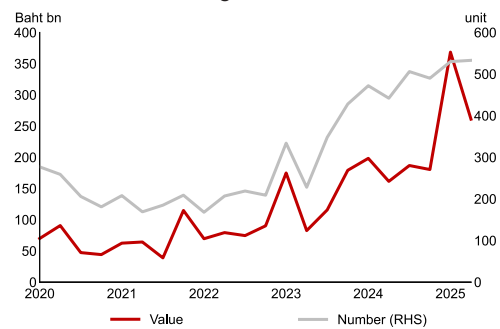
Source: National authorities via CEIC; AMRO staff calculations.

Tourist arrivals remained subdued, contracting by 7 percent in the first eight months of 2025.



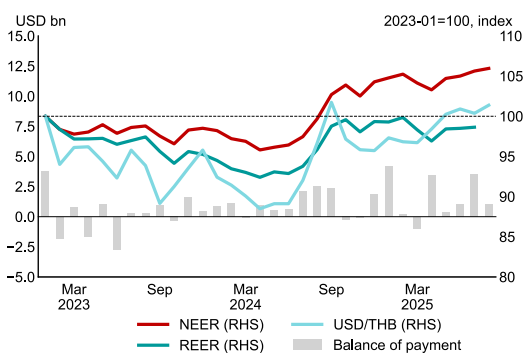
Source: National authorities via CEIC; AMRO staff calculations.  
Note: Others include non-monetary gold.

FDI approvals continued to rise in 2025, especially in high-tech sectors.



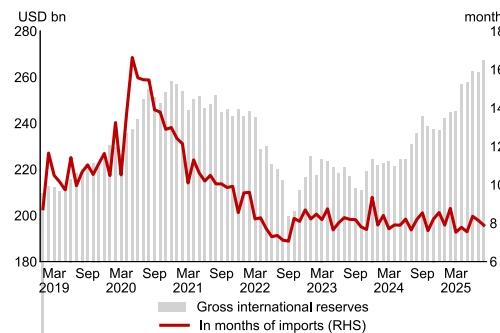
Source: National authorities via CEIC; AMRO staff calculations.  
Note: NR = non-resident.

The THB has strengthened against the USD since March 2025, but to a lesser extent in terms of effective rates.



Source: National authorities via CEIC; AMRO staff calculations.

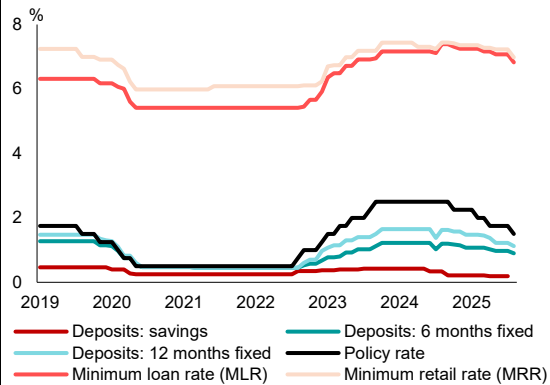
Reserves remained ample, with stable import cover.



Source: National authorities via CEIC; AMRO staff calculations.

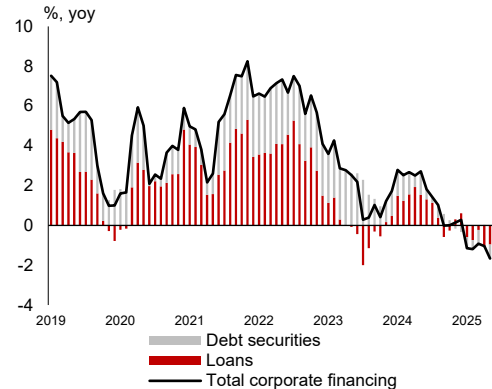
**Figure 1.3. Monetary and financial sector**

Interest rates have generally moved in line with the four policy rate cuts since October 2024.



Source: National authorities via CEIC

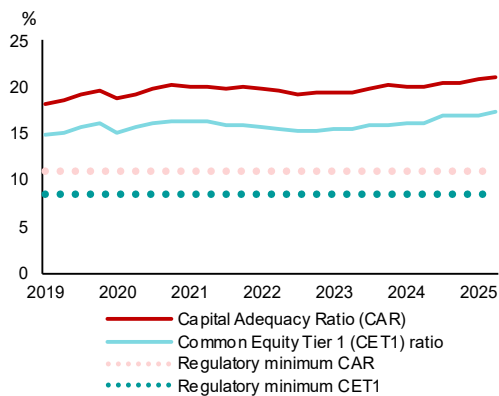
For corporates, financing through both loans and debt securities continued to contract.



Source: Bank of Thailand

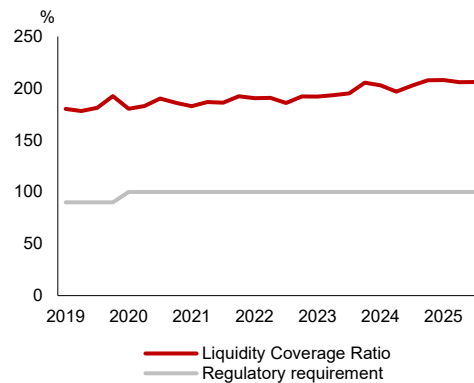
Note: Loans are overdraft, borrowings, and bills including accrued interests. Debt securities are bonds, debentures, and P/N or B/E including interest accrued but not yet paid.

Banks remain well buffered with capital, with a CAR at 21 percent as of Q3 2025.



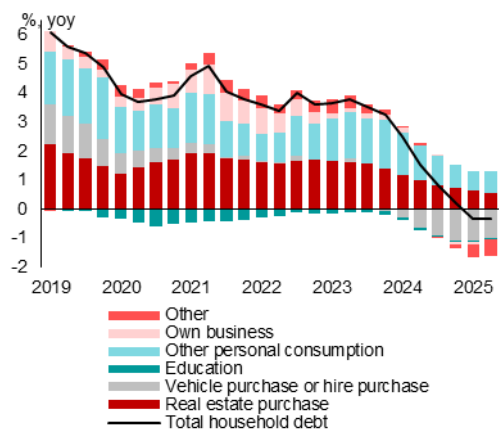
Source: National authorities via CEIC

Liquidity Coverage Ratio also remained high at 204 percent as of Q3 2025



Source: National authorities via CEIC

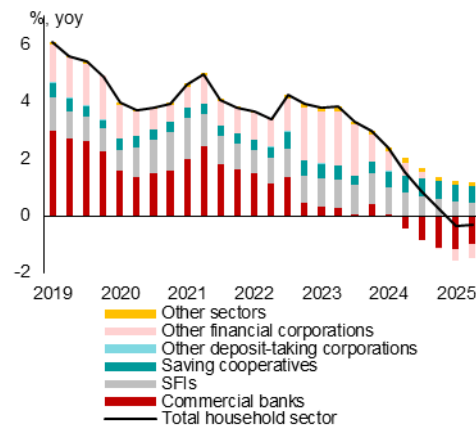
For households, debt levels gradually declined, with the largest contraction in auto loans.



Source: BOT

Note: 'Other personal consumption' includes credit card loans and personal loans by non-bank lenders. 'Other' are borrowings to invest in securities and other loans that cannot be classified.

As bank lending contracted, households continued to rely on SFIs and cooperatives



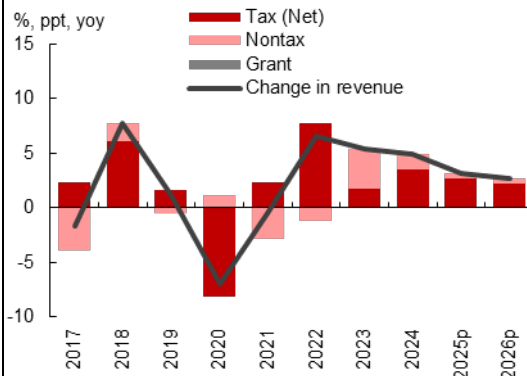
Source: BOT

Note: 'Other deposit-taking corporations' are credit foncier companies and credit union cooperatives. 'Other financial corporations' are credit card, leasing, personal loan, insurance, and securities companies; and pawn shops. 'Other sectors' are the Student Loan Fund, National Housing Authority, and other non-saving cooperatives

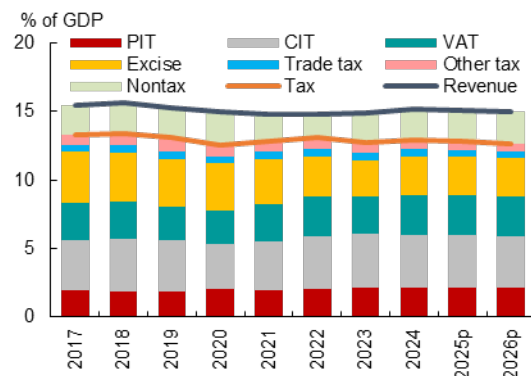
**Figure 1.4. Fiscal Sector**

In FY2024-2025, revenue collection in line with the budget has been driven mainly by tax revenues...

...supported by personal income, corporate, and value-added taxes, while excise revenues eased with EV incentives.



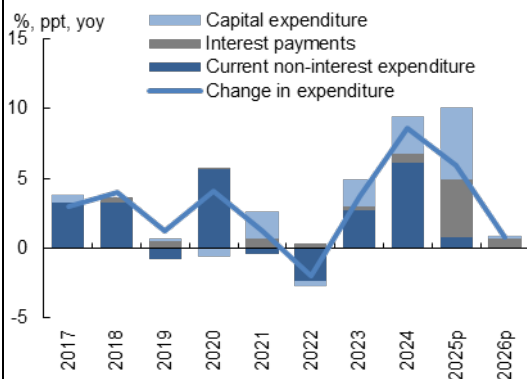
Source: TMOF; AMRO staff projections



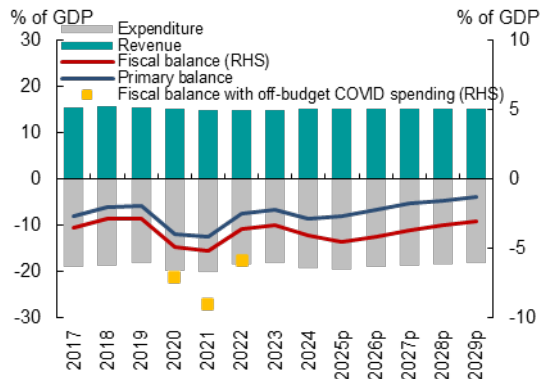
Source: TMOF; AMRO staff projections

Supplementary budget raised FY2024 spending, while FY2025 expenditure rose from continued stimulus and higher interest payments.

Fiscal deficits are projected to narrow in the medium term.



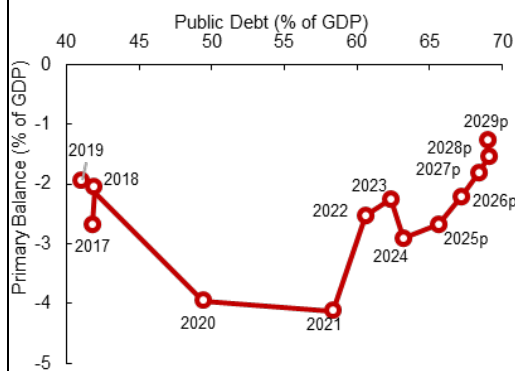
Source: TMOF; AMRO staff projections



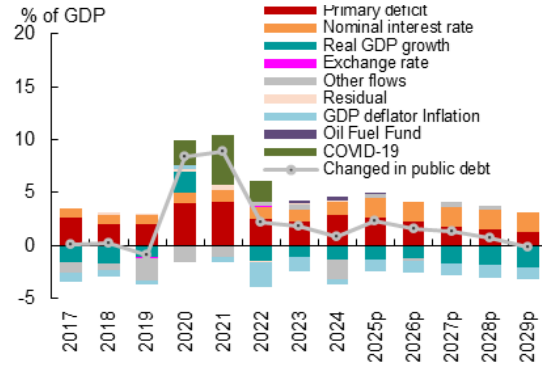
Source: TMOF; AMRO staff projections

Fiscal consolidation is expected to narrow the primary balance and moderate growth in public debt

...but debt will remain elevated in the medium term amid subdued growth and high interest payments.



Source: TMOF; AMRO staff projections



Source: TMOF; AMRO staff projections

## Appendix 2. Selected Economic Indicators for Thailand

	2021	2022	2023	2024	Projection	
					2025	2026
Real sector	(In percent change unless specified)					
Real GDP	1.6	2.6	2.0	2.5	2.2	1.9
Final consumption	1.3	4.8	4.3	4.0	2.3	2.4
Private sector	0.6	6.2	6.9	4.4	2.5	2.6
Public sector	3.7	0.1	-4.7	2.5	1.4	1.3
Gross fixed capital formation	3.2	2.3	1.2	0.0	3.0	3.5
Private sector	3.0	4.6	3.1	-1.6	0.1	1.2
Public sector	3.5	-3.9	-4.2	4.8	4.8	3.5
Export of Goods and Services	11.1	6.2	2.4	7.8	4.3	0.7
Goods	15.3	1.1	-2.6	4.3	1.8	-0.2
Services	-20.0	60.1	38.2	25.5	9.0	4.3
Import of Goods and Services	17.9	3.4	-2.5	6.3	4.7	3.4
Goods	18.3	1.0	-4.3	5.3	3.8	2.8
Services	16.1	13.4	5.5	10.3	9.9	5.6
Consumer price inflation (period average)	1.2	6.1	1.2	0.4	0.5	0.8
Core inflation (period average)	0.2	2.5	1.3	0.6	1.0	0.9
Unemployment rate (period average)	1.9	1.3	1.1	1.1	1.1	1.1
External sector	(in billions of US dollars unless specified)					
Current account balance	-10.7	-17.2	7.4	13.3	10.8	4.4
(In percent of GDP)	-2.1	-3.5	1.4	2.5	2.0	0.8
Trade balance	31.9	13.5	19.4	19.3	17.6	11.4
(In percent of GDP)	6.4	2.8	3.8	3.7	3.2	2.1
Exports, f.o.b.	270.6	285.2	280.7	297.0	310.2	311.7
Imports, f.o.b.	238.6	271.6	261.4	277.8	292.7	300.3
Services, net	-32.5	-23.9	-8.9	-1.2	-2.0	-2.5
Receipts	25.4	38.9	56.7	70.3	81.7	86.9
Payments	57.9	62.8	65.6	71.5	83.7	89.4
Primary income, net	-17.6	-15.9	-13.0	-12.7	-12.8	-12.4
Secondary income, net	7.4	9.0	9.9	8.4	8.0	7.8
Financial account balance	-7.0	6.7	-11.9	0.0	-3.1	-3.0
Direct investment, net	-4.0	4.0	-7.2	-4.0	2.2	3.0
Portfolio investment, net	-12.0	5.8	-13.7	-6.8	-10.7	-11.3
Financial Derivatives, net	-1.2	0.3	-0.1	0.2	0.1	0.2
Other investment, net	10.1	-3.4	9.1	6.2	5.2	5.1
Errors and omissions	10.7	0.2	7.0	0.1	0.0	1.0
Overall balance	-7.1	-10.2	2.6	12.4	7.7	3.4
Gross official reserves excluding net forward position	246.0	216.6	224.5	237.0	244.8	248.2
(In months of imports of goods & services)	10.0	7.8	8.2	8.1	9.7	9.6
Short-term debt in percent of total debt	38.3	40.3	41.3	43.4	-	-
Total external debt	196.9	201.4	196.5	185.5	-	-
Short-term debt (% of international reserves)	30.7	37.5	36.2	35.3	-	-
Fiscal sector <sup>1</sup>	(in percent of FY GDP)					
Revenue	14.8	14.8	14.9	15.2	15.1	15.0
Expenditure	20.1	18.4	18.3	19.3	19.6	19.1
Fiscal balance	-5.2	-3.6	-3.3	-4.0	-4.5	-4.1
Public debt	58.4	60.5	62.3	63.2	65.6	67.1
Monetary sector	(In percent change)					
Domestic private credit (in percentage change)	5.0	4.0	2.4	0.3	-	-
(In percent of GDP)	143.3	137.0	135.1	134.4	-	-
Policy rate (percent per annum, end of period)	0.5	1.0	2.5	2.25	-	-
10-year government bond yield (period average)	1.8	2.7	2.7	2.6	-	-
Broad money	4.8	3.9	1.9	3.4	-	-
Memorandum items:						
Exchange rate (THB per US\$, average)	32.0	35.1	34.8	35.3	35.3	35.3
Exchange rate (THB per US\$, end of period)	32.8	33.8	34.8	34.3	34.3	34.3
Nominal GDP (in THB trillion)	16.2	17.4	18.0	18.6	19.0	19.4
Nominal GDP (in US\$ billion)	500.4	488.8	513.6	518.9	543.5	548.7
GDP per capita (US\$)	7,648.4	7,471.5	7,850.5	7,931.2	8,307.6	8,387.5

Source: National authorities; AMRO staff estimates and projections

Note: 1/ The fiscal year runs from October to September.

## Appendix 3. Medium-term Projections for Key Economic Indicators

	2024	Projection				
		2025	2026	2027	2028	2029
<b>Real sector</b>		(In percent change unless specified)				
Real GDP	2.5	2.2	1.9	2.6	2.9	3.1
Final consumption	4.0	2.3	2.4	2.5	2.7	2.9
Private sector	4.4	2.5	2.6	2.7	2.8	2.8
Public sector	2.5	1.4	1.3	1.5	1.7	1.5
Gross fixed capital formation	0.0	3.0	3.5	4.0	2.6	3.3
Private sector	-1.6	0.1	1.2	0.8	0.1	0.5
Public sector	4.8	4.8	3.5	3.3	2.7	2.4
Export of Goods and Services	7.8	4.3	0.7	3.1	4.0	3.0
Goods	4.3	1.8	-0.2	1.0	1.7	1.1
Services	25.5	9.0	4.3	8.3	11.7	8.3
Import of Goods and Services	6.3	4.7	3.4	5.0	4.8	4.5
Goods	5.3	3.8	2.8	4.1	4.0	3.7
Services	10.3	9.9	5.6	9.7	8.9	8.5
Consumer price inflation (period average)	0.4	0.5	0.8	0.9	1.1	1.3
Core inflation (period average)	0.6	1.0	0.9	1.0	1.0	1.0
Unemployment rate (period average)	1.1	1.1	1.1	1.1	1.1	1.1
<b>External sector</b>		(in billions of US dollars unless specified)				
Current account balance	13.3	10.8	4.4	9.0	9.4	8.4
(In percent of GDP)	2.5	2.0	0.8	1.7	1.7	1.5
Trade balance	19.3	17.6	11.4	17.8	17.3	16.8
(In percent of GDP)	3.7	3.2	2.1	3.2	3.1	2.9
Exports, f.o.b.	297.0	310.2	311.7	314.9	323.9	331.0
Imports, f.o.b.	277.8	292.7	300.3	297.2	306.6	314.1
Services, net	-1.2	-2.0	-2.5	-1.7	0.2	0.5
Receipts	70.3	81.7	86.9	88.9	92.0	93.4
Payments	71.5	83.7	89.4	90.6	91.8	92.9
Primary income, net	-12.7	-12.8	-12.4	-12.7	-12.6	-12.6
Secondary income, net	8.4	8.0	7.8	8.5	8.2	8.1
Financial account balance	0.0	-3.1	-3.0	-4.5	-2.6	-3.3
Direct investment, net	-4.0	2.2	3.0	-1.5	-0.1	0.9
Portfolio investment, net	-6.8	-10.7	-11.3	-10.6	-9.8	-10.6
Financial Derivatives, net	0.2	0.1	0.2	0.1	0.2	0.1
Other investment, net	6.2	5.2	5.1	6.4	5.7	5.6
Errors and omissions	0.1	0.0	1.0	2.0	0.8	0.9
Overall balance	12.4	7.7	3.4	6.5	7.5	6.3
Gross official reserves excluding net forward position (In months of imports of goods & services)	237.0 8.1	244.8 9.7	248.2 9.6	238.6 8.9	242.2 9.1	243.4 9.3
<b>Fiscal sector<sup>1</sup></b>		(in percent of FY GDP)				
Revenue	15.2	15.1	15.0	15.0	15.0	15.0
Expenditure	19.3	19.6	19.1	18.6	18.3	18.0
Fiscal balance	-4.0	-4.5	-4.1	-3.7	-3.4	-3.1
Public debt	63.2	65.6	67.1	68.4	69.1	68.9
<b>Memorandum items:</b>						
Exchange rate (THB per US\$, average)	35.3	35.3	35.3	35.2	35.2	35.2
Exchange rate (THB per US\$, end of period)	34.3	34.3	34.3	34.4	34.3	34.4
Nominal GDP (in THB trillion)	18.6	19.0	19.4	19.5	19.7	20.0
Nominal GDP (in US\$ billion)	518.9	543.5	548.7	553.5	559.4	566.5
GDP per capita (US\$)	7,931.2	8,307.6	8,387.5	8,460.2	8,551.6	8,659.8

Source: National authorities; AMRO staff estimates and projections

Note: 1/ The fiscal year runs from October to September.

#### Appendix 4. Balance of Payments

Unit: USD billion	2021	2022	2023	2024	Projection				
					2025	2026	2027	2028	2029
<b>Current account balance (I)</b>	-10.7	-17.2	7.4	12.3	10.8	4.4	9.0	9.4	8.4
Trade balance	31.9	13.5	19.4	19.3	17.6	11.4	17.8	17.3	16.8
Exports, f.o.b.	270.6	285.2	280.7	297.0	310.2	311.7	314.9	323.9	331.0
Imports, f.o.b.	238.6	271.6	261.4	277.8	292.7	300.3	297.2	306.6	314.1
Services, net	-32.5	-23.9	-8.9	-1.2	-2.0	-2.5	-1.7	0.2	0.5
Receipts	25.4	38.9	56.7	70.3	81.7	86.9	88.9	92.0	93.4
Payments	57.9	62.8	65.6	71.5	83.7	89.4	90.6	91.8	92.9
Primary income, net	-17.6	-15.9	-13.0	-12.7	-12.8	-12.4	-12.7	-12.6	-12.6
Secondary income, net	7.4	9.0	9.9	8.4	8.0	7.8	8.5	8.2	8.1
<b>Capital account balance (II)</b>	0.0	0.6	2.0	0.0	0.0	1.0	0.0	0.0	0.0
<b>Financial account balance, net<sup>1</sup> (III)</b>	-7.0	6.7	-11.9	0.0	-3.1	-3.0	-4.5	-2.6	-3.3
Direct investment, net	-4.0	4.0	-7.2	-4.0	2.2	3.0	-1.5	-0.1	0.9
Portfolio investment, net	-12.0	5.8	-13.7	-6.8	-10.7	-11.3	-10.6	-9.8	-10.6
Financial derivatives, net	-1.2	0.3	-0.1	0.2	0.1	0.2	0.1	0.2	0.1
Other investment, net	10.1	-3.4	9.1	6.2	5.2	5.1	6.4	5.7	5.6
<b>Errors and omissions (IV)</b>	10.7	0.2	7.0	0.1	0.0	1.0	2.0	0.8	0.9
<b>Overall balance (=I + II - III + IV)</b>	-7.1	-10.2	2.6	12.4	7.7	3.4	6.5	7.5	6.3
<b>Reserve assets (+ indicates increases)</b>	-7.1	-10.2	2.6	12.4	7.7	3.4	6.5	7.5	6.3
<b>Memorandum items:</b>									
Current account balance (% of GDP)	-2.1	-3.5	1.4	2.3	2.0	0.8	1.7	1.7	1.5
Gross official reserves excluding net forward position	246.0	216.6	224.5	237.0	244.8	248.2	238.6	242.2	243.4
GDP	506.1	495.8	516.2	526.6	543.5	548.7	553.5	559.4	566.5

Source: National authorities; AMRO staff estimates and projections

Note: 1/ The financial account is presented based on the BPM5 format. Net outflows in net balances are indicated by a minus (-) sign. 2025 data are annual projections by AMRO; latest available data can be found [here](#).

#### Appendix 5. Statement of General Government Operations

Unit: THB billion	FY2021	FY2022	FY2023	FY2024	Projection				
					FY2025	FY2026	FY2027	FY2028	FY2029
<b>Net revenue</b>	2375.6	2531.7	2666.8	2797.7	2887.2	2963.1	3095.4	3235.2	3395.9
(% of GDP)	14.8	14.8	14.9	15.2	15.1	15.0	15.0	15.0	15.0
<b>Expenditure</b>	3208.7	3146.2	3262.4	3542.4	3752.7	3780.6	3855.0	3966.0	4093.0
(% of GDP)	20.1	18.4	18.3	19.3	19.6	19.1	18.6	18.3	18.0
Current	2583.8	2516.6	2610.2	2829.3	3002.2	3024.5	3084.0	3172.8	3274.4
Capital	428.4	416.0	478.2	566.6	750.5	756.1	771.0	793.2	818.6
Carry over	196.5	213.7	174.0	146.4	0.0	0.0	0.0	0.0	0.0
<b>Fiscal balance / Domestic borrowings</b>	-833.1	-614.5	-595.6	-744.7	-865.5	-817.5	-759.6	-730.8	-697.1
(% of GDP)	-5.2	-3.6	-3.3	-4.0	-4.5	-4.1	-3.7	-3.4	-3.1
<b>Public debt (% of GDP)</b>	58.4	60.5	62.3	63.2	65.6	67.1	68.4	69.1	68.9

Source: National authorities; AMRO staff estimates and projections

Note: 1/ The fiscal year runs from October to September.



## Appendix 6. Monetary Survey

Unit: THB Billion	2021	2022	2023	2024	Projection 2025
<b>Net Foreign Assets</b>	7763	7570	7897	8495	8,754
Claims on Non Resident	10264	9656	9939	10248	10,243
Liabilities to Non Resident	2501	2086	2042	1754	1,490
<b>Net Domestic Assets</b>	16219	17349	17500	17761	18,306
Domestic Credit	24308	24308	25121	25501	25,912
Net claims on central government	2280	2534	2992	3455	3,969
Claims on other sectors	22120	22913	23419	23548	24,044
<b>Broad Money</b>	23982	24919	25397	26255	27,060
Currency in circulation	1990	2028	2157	2303	2,418
Deposits	21132	21982	22323	23024	23,692
Other liabilities	861	909	918	929	951

Source: National authorities; AMRO staff estimates and projections

## Appendix 7. Climate Clipboard—Risks, Responses, and Opportunities<sup>25</sup>

**1. Climate change risks could endanger Thailand’s long-term growth and stability.** The recently released World Risk Index Report 2025, which measures exposure to natural hazards and vulnerability to their impacts across more than 190 economies, showed a slight improvement in Thailand’s risk ranking to 24th globally from the 21st last year ([BEH 2025](#)). This improvement reflects a lower vulnerability score and reduced susceptibility. The decline in vulnerability was driven by continued investments in healthcare, infrastructure, and social protection, while susceptibility fell due to better disaster preparedness and early-warning systems. Nevertheless, Thailand remains among the more exposed countries globally, given its geography and dependence on coastal and agricultural activities. Introduced in 2023, AMRO’s Thailand Climate Clipboard aims to monitor developments made by policymakers to advance efforts in building long-term climate resilience ([AMRO 2023a](#)) (Table A7.1).

**2. Since last year, Thailand has taken key steps towards achieving its climate change commitments.** Thailand has already implemented a carbon tax on petroleum products since March 2025, which is set initially at THB 200.0 (approximately USD 5.5) per ton of carbon dioxide equivalent, making it the second ASEAN economy to implement a carbon pricing mechanism. As the tax will be integrated into the current oil tax structure, it is unlikely to significantly dent fossil fuel consumption at the proposed price. Nevertheless, it sends a strong signal to the market on the direction of Thailand’s climate policies, and could also potentially minimize the impact from the forthcoming Carbon Border Adjustment Mechanism (CBAM) of the European Union ([AMRO 2023b](#)). Similarly, the draft Climate Change Act has undergone two public hearings nationwide in Q1 2024, and is in line to be reviewed by the Thai Cabinet once stakeholders’ feedback has been reflected. Once approved, the Act will put in place formal mechanisms and modalities for other key policy instruments, including a domestic emission trading system, greenhouse gas reporting, and carbon credit regulations.

Table A7.1. Thailand’s “Climate Clipboard” (September 2025)

A. Physical risks	
Sources of risk	Potential macro-financial impacts
<ul style="list-style-type: none"> <li>• Flooding (acute, chronic)</li> <li>• Drought (acute, chronic)</li> <li>• Tropical cyclones (acute)</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Lower growth prospects</i>, with average annual losses associated with flooding at approximately USD 2.6 billion, or about 0.5 percent of 2023 GDP (<a href="#">WBG-ADB 2021</a>).</li> <li>• <i>Decline in manufacturing activity and exports</i>, especially if flooding hits key manufacturing provinces. In 2011, nearly 70 percent of the total damage and losses were borne by Thai manufacturers (<a href="#">World Bank 2012</a>).</li> <li>• <i>Decline in tourism</i>, as extreme flood events do not only damage tourism infrastructure but also lead to revenue losses in tourism-related activities, such as accommodation and transport. Droughts increase the risks of forest fires, which can also affect tourism, a sector that accounts for about 20 percent of GDP.</li> <li>• <i>Deterioration in the current account</i>, resulting from a combination of a decline in manufacturing exports and a significant fall in tourism revenues.</li> <li>• <i>Increase in inflation</i>, resulting from a decline in agricultural output due to floods and droughts.</li> <li>• <i>Potential weakness in the financial system</i> from higher credit risks, as borrowers might not be able to generate adequate income to repay loans.</li> </ul>

<sup>25</sup> Prepared by Yuhong Wu.

	<ul style="list-style-type: none"><li>• <i>Decline in productivity</i>, with extreme flooding likely to affect an additional 2.3 million people by 2030–44 via loss of human life and deteriorating public health conditions from waterborne diseases (<a href="#">WBG-ADB 2021</a>).</li></ul>			
B. Transition risks				
Sources of risk	Potential macro-financial impacts			
<ul style="list-style-type: none"><li>• Phasing out use of coal and other fossil fuels</li><li>• Border carbon adjustments in other economies</li><li>• Domestic carbon pricing instruments</li></ul>	<ul style="list-style-type: none"><li>• <i>Increase in inflation</i>, especially if green alternatives are not widely available or affordable during the phaseout.</li><li>• <i>Decline in exports</i>, arising from global carbon pricing policies. AMRO analysis suggests that Thailand is among those most affected in ASEAN if the EU's CBAM covers a wider range of sectors (<a href="#">AMRO 2023b</a>).</li><li>• <i>Higher unemployment</i> or underemployment, due to the potential displacement of workers in sectors that need to make the transition rapidly out of fossil fuel use.</li><li>• <i>Lower FDI and funding sources</i> available to high-emitting sectors, which could lead to liquidity risk for businesses that are not able to make the transition quickly enough.</li></ul>			
C. Adaptation response framework and strategies				
Adaptation framework	Key initiatives/strategies	Estimated financing needs and sources		
<ul style="list-style-type: none"><li>• <a href="#">Climate Change Master Plan 2015-50 (Jul 2015)</a></li><li>• <a href="#">National Adaptation Plan</a> (Nov 2023)</li></ul>	<ul style="list-style-type: none"><li>• Implementation of <a href="#">climate change adaptation</a> focuses on building adaptive capacity in six priority sectors: water resource management, agriculture and food security, tourism, public health, natural resources management, and human settlement and scarcity.</li><li>• Regular assessments and review of NAP implementation will be made, whenever necessary.</li></ul>	<ul style="list-style-type: none"><li>• USD 6.1 billion (1.4 percent of GDP) per annum under a worst-case economic scenario with 2-degree warming (<a href="#">UNESCAP 2024</a>).</li></ul>		
		<table><tr><th>Domestic</th><th>External</th></tr><tr><td><ul style="list-style-type: none"><li>• Annual budgets</li></ul></td><td><ul style="list-style-type: none"><li>• Green Climate Fund</li><li>• Multilateral development banks (ADB)</li></ul></td></tr></table>	Domestic	External
Domestic	External			
<ul style="list-style-type: none"><li>• Annual budgets</li></ul>	<ul style="list-style-type: none"><li>• Green Climate Fund</li><li>• Multilateral development banks (ADB)</li></ul>			
D. Mitigation response framework and strategies				
2nd Updated Nationally Determined Contribution (NDC)	National framework/strategies	Estimated financing and sources		
<ul style="list-style-type: none"><li>• Unconditional reduction of economy-wide greenhouse gas (GHG) emissions by 30 percent from the projected BAU level by 2030 relative to reference year 2005 level (in the absence of major climate change policies; BAU2030: approximately 555 MtCO<sub>2</sub>e).</li><li>• The above target could increase up to 40 percent, subject to “adequate and enhanced access to technology development and transfer, financial resources, and capacity building support.” (<a href="#">UNFCCC 2022</a>)</li></ul>	<ul style="list-style-type: none"><li>• NDC Roadmap on Mitigation 2021–30<ul style="list-style-type: none"><li>➢ Identifies mitigation actions in four sectors – energy, transport, industrial processes and product use, and waste management – to achieve the NDC target, the implementation of which will be guided by the NDC Sectoral Action Plans 2021–30.</li><li>➢ The energy sector accounts for nearly 70 percent of Thailand's total emissions in 2018.</li></ul></li><li>• <a href="#">Long-term Low GHG Emission Development Strategy</a> (Oct 2021)<ul style="list-style-type: none"><li>➢ Sets targets and measures to achieve Thailand's net-zero GHG goal, including peaking emissions at approximately 370 MtCO<sub>2</sub>eq by 2030 and meeting carbon neutrality by 2065.</li></ul></li></ul> <p>Key sectoral strategies and initiatives</p> <ul style="list-style-type: none"><li>• <a href="#">Power Development Plan</a> 2018–37</li><li>• <a href="#">Alternative Energy Development Plan</a> 2018–37</li><li>• <a href="#">Energy Efficiency Plan</a> (2018)</li><li>• <a href="#">Smart Grid Development Master Plan</a> 2015–36</li><li>• <a href="#">Thailand Integrated Energy Blueprint</a> (Jun 2015)</li><li>• Master Plan for Sustainable Transport System and Mitigation of Climate Change Impacts (2013–30)</li></ul>	<ul style="list-style-type: none"><li>• USD 30 billion per annum in energy system investments over 30 years (<a href="#">AIGCC 2021</a>)</li></ul>		
E. Enabling regulations for climate resilience				
E.1. Legal frameworks	E.3. Carbon pricing frameworks	E.4. Sustainable finance frameworks		

<ul style="list-style-type: none"> <li>The Climate Change Act, for revision after a public hearing process, is pending Cabinet approval. It introduces multiple carbon pricing mechanisms such as carbon tax the establishment of the National Climate Change Fund. The draft Act also includes compulsory greenhouse gas reporting (as of <a href="#">Apr 2024</a>).</li> <li>The <a href="#">13th National Economic and Social Development Plan</a> (2023–27) explicitly identifies mitigating risks from natural disasters and climate change as a development milestone (11 of 13).</li> </ul>	<ul style="list-style-type: none"> <li>A carbon tax was set at THB 200 (~USD 5.5) per ton of CO<sub>2</sub>e, implemented since March 2025, only on oil products such as diesel and gasoline (November 2025).</li> <li>Excise tax currently levied on products that cause environmental damage, namely passenger vehicles, with tax rates varying according to the level of carbon emissions.</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Kingdom of Thailand Sustainable Financing Framework</a> (Jul 2020) sets out the process of raising green, social and sustainability financing instruments.</li> <li>➤ The framework is established in line with key ASEAN-wide standards and those issued by the International Capital Market Association.</li> </ul>
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#### E.5. Financial system

Initiatives	Guidelines	Status
1. Taxonomy	<ul style="list-style-type: none"> <li>Thailand <a href="#">Taxonomy Phase 1</a> (Jun 2023)</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Phase 1</a> is focused on two sectors, energy and transport, which account for about 70 percent of economy-wide emissions.</li> <li>Phase 2 is being drafted and will focus on four sectors: manufacturing, agriculture, building and construction, and waste management.</li> </ul>
2. Risk management assessments	<ul style="list-style-type: none"> <li><a href="#">Sustainable Banking Guidelines</a> (2019)</li> <li><a href="#">Policy Statement of the Bank of Thailand Re: Internalizing Environmental and Climate Change Aspects into Financial Institution Business</a> (Feb 2023)</li> </ul>	<ul style="list-style-type: none"> <li>BOT's evaluation of financial institutions in accordance with the <a href="#">policy statement</a> has been implemented from 2024 onwards, using self-assessment to evaluate progress in the early stage.</li> <li>An industry handbook was launched in 2023 to support practical implementation of the policy statement, and to be used as the minimum standard in risk management (<a href="#">BOT Directional Paper on Financial Landscape</a>, Aug 2022).</li> <li>A climate stress test was launched in 2024, with the initial phase a pilot exercise to identify and address both technical and knowledge gaps. The pilot exercises on physical risks and transition risks took place in 2025, respectively. Thereafter, the full stress test will be conducted every other year.</li> </ul>
3. Climate-related disclosures	<ul style="list-style-type: none"> <li><a href="#">The Stock Exchange of Thailand Guidelines for Sustainability Reporting</a>, including "One Report" (2021)</li> <li><a href="#">Guidelines on Management and Disclosure of Climate-related Risk by Asset Managers</a> (Jan 2023)</li> <li><a href="#">Policy Statement of the Bank of Thailand Re: Internalizing Environmental and Climate Change Aspects into Financial Institution Business</a> (Feb 2023)</li> </ul>	<ul style="list-style-type: none"> <li>The BOT plans to launch guidelines on disclosures and is also collaborating with stakeholders to create a central database on ESG disclosures (<a href="#">Mar 2023</a>).</li> </ul>

F. Potential opportunities from the low-carbon transition		
<ul style="list-style-type: none"> <li>Exports of solar-related products, such as solar panels</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturing of EVs and parts</li> </ul>	<ul style="list-style-type: none"> <li>Energy storage, including EV batteries</li> <li>Carbon capture and storage</li> <li>Carbon credits and offsets</li> </ul>

Source: AMRO staff compilations

Note: Information updated as of September 30, 2025. Information sourced and compiled from AIGCC (2021); AMRO (2024, 2023); Baker McKenzie (2023); BOT (2022, 2023a, 2023b); MOE (2015, 2018a, 2018b, 2015); NESDC (2022); Office of the Thai Prime Minister (2024); ONEP (2015); Pichetsatha (2024); PDMO (2020); SEC (2023); SET (2024); TBA (2019) UNESCAP (2024); UNFCCC (2021, 2022, 2023); WBG (2012); WBG-ADB (2021).

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## Annexes: Selected Issues

### 1. Monetary Policy under High Uncertainty: A Scenario-Based Approach for Thailand<sup>26</sup>

*Monetary policy has become increasingly complex amid heightened uncertainty and overlapping demand and supply shocks. In Thailand, the slowdown in domestic demand calls for policy support, yet the historically low policy rate calls for preservation of policy space. This note employs a New Keynesian framework that embeds the option value of waiting to analyze whether the central bank should act or wait when faced with uncertainty about the nature of shocks. The analysis highlights how the case for acting early versus waiting to preserve limited policy space depends critically on whether shocks are transitory or persistent, illustrated through a scenario of persistent domestic demand weakness in the context of Thailand.*

#### A More Adaptive Monetary Policy Framework Amid Unprecedented Uncertainty

**1. Monetary policy decision making has become increasingly challenging in recent years due to unprecedented uncertainty. Traditional frameworks—such as the Taylor Rule—presume stable relationships between key variables, but reality has diverged significantly. The convergence of diverse and evolving shocks—from the pandemic to supply disruptions and geopolitical tensions—has blurred the distinction between transitory and persistent shocks, complicating decisions on both the direction and timing of policy. This is no longer just noise—it is the new normal for central banks.**

**2. Thailand at the current juncture offers a clear example of this dilemma.** Private consumption and overall domestic demand have weakened notably in Thailand, while external conditions remain highly uncertain. At the same time, the policy rate is already low, with limited room for further easing. This raises a difficult question: should the central bank act now to support growth or hold back and preserve space given the highly uncertain outlook? The Bank of Thailand has rightly emphasized the importance of a more flexible and robust policy framework under such circumstances.

**3. This note draws on a New Keynesian model that embeds uncertainty and the option value of waiting for central bank action<sup>27</sup>.** The central bank may optimally choose to act or wait in the face of a shock, depending on the nature and persistence of shocks, and the degree of uncertainty it faces. This approach is adapted to the case Thailand by developing a scenario-based strategy, focused on identifying the types of shocks most relevant to the Thai economy and evaluating the policy trade-offs between acting now and waiting.

**4. The analysis shows that whether to ease policy in the face of weakening growth momentum depends critically on the persistence of the shock.** In Thailand's case, the one of the most pressing issues is the risk of a prolonged weakness in domestic demand. This paper proposes a set of indicators and an empirical framework to assess that scenario, providing insights on whether immediate support or more caution is justified.

<sup>26</sup> By Haobin Wang and Yuhong Wu.

<sup>27</sup> This note draws on a fuller discussion on monetary policy under high uncertainty in Ng and Wang (Forthcoming).



## Basic Setup of the Theoretical Framework

5. The analytical framework extends the standard New Keynesian model by embedding uncertainty directly into the central bank's optimization problem, allowing policy decisions to explicitly account for the option value of waiting. By modeling the "option value of waiting," the framework captures the trade-off between immediate policy response and preserving policy space to respond once more is known about the nature of the shock, that is, whether it is transitory or persistent.

6. The model comprises two periods,  $t = 1, 2$ , and is built around static representations of the IS and Phillips curves:

$$y_t = -\left(\frac{1}{\varphi}\right) \cdot (r_t - r^n) + \varepsilon_t^d \quad (IS \text{ Curve})$$

$$\pi_t = \kappa \cdot y_t + \varepsilon_t^s \quad (Phillips \text{ Curve})$$

where  $y_t$  is the output gap,  $\pi_t$  is inflation,  $r_t$  is the policy rate, and  $r^n$  is the natural rate of interest (normalized to zero).  $\varepsilon_t^d$  and  $\varepsilon_t^s$  represent demand and supply shocks, respectively. The central bank sets the nominal interest rate  $r_t$  each period.

## Central Bank Objective and Policy Timing Structure

7. The policymaker minimizes the expected quadratic loss over the two periods:

$$L = \sum_{t=1}^2 \left( \frac{1}{2} y_t^2 + \frac{\lambda}{2} \pi_t^2 \right)$$

where  $\lambda > 0$  captures the central bank's relative aversion to inflation versus output deviations

- In period 1, shocks  $(\varepsilon_1^d, \varepsilon_1^s)$  are realized and perfectly observed by the central bank.
- In period 2, shocks  $(\tilde{\varepsilon}_2^d, \tilde{\varepsilon}_2^s)$  are unknown at  $t = 1$ .  
The policymaker holds prior beliefs:
  - With probability  $p_2$ , a demand shock  $\tilde{\varepsilon}_2^d$  occurs;
  - With probability  $1 - p_2$ , a supply shock  $\tilde{\varepsilon}_2^s$  occurs.

The central bank can either:

- a) **Act Now:** Set  $r_1 \neq 0$  based on observed shocks; the same rate is assumed to apply in period 2, i.e.  $r_2 = r_1$ , reflecting policy transmission lags and policy continuity across periods (cost of adjusting rate consecutively).
- b) **Wait:** Let  $r_1 = 0$  (natural rate) and optimally set  $r_2$  in period 2 after observing new shocks.

**Optimal Policy under Immediate Action vs Waiting**

8. If the central bank acts in period 1 and maintains the same rate in period 2, the expected loss is:

$$E[L \mid \text{act}] = L_1(r) + E_2[L_2(r)]$$

The first-order condition yields the optimal policy rate:

$$r^* = \frac{\phi}{1 + \lambda\kappa^2} (\varepsilon_1^d + p\mu_d - \lambda\kappa\varepsilon_1^s - \lambda\kappa(1-p)\mu_s)$$

where  $\mu_d$  and  $\mu_s$  are the expected future demand and supply shocks

If the central bank waits, the expected loss becomes:

$$E[L \mid \text{wait}] = L_1(r_1 = 0) + E_2[L_2(r_2^*)]$$

And optimal policy rates are:

$$r_1 = 0, r_2^* = \frac{\phi}{1 + \lambda\kappa^2} (\tilde{\varepsilon}_2^d - \lambda\kappa\tilde{\varepsilon}_2^s)$$

**Core Insight: The Threshold Rule**

9. The central bank chooses to act in period 1 if the observed shocks are large enough to outweigh the option value of waiting. The threshold condition is expressed as:

$$|\varepsilon_1^d| + \frac{\lambda\kappa}{1 + \lambda\kappa^2} |\varepsilon_1^s| > c \cdot \sqrt{p_2(\sigma_d^2 + \lambda\kappa^2\sigma_d^2) + (1-p_2)(\lambda\sigma_s^2 + \frac{\sigma_s^2}{\phi^2})}$$

where:

- The left-hand-side (LHS) represents the weighted magnitude of observed shocks (the motive to act now)
- The right-hand-side (RHS) captures the option value of waiting, which increases with future uncertainty;  $\sigma_d^2$  and  $\sigma_s^2$  measure the variance of shocks
- The constant  $c \in (0,1)$  governs the degree of caution:
  - Lower  $c$ : more aggressive response (higher activism)
  - Higher  $c$ : more cautious response (greater willingness to wait)

The central bank acts if the above condition holds. Under high uncertainty, the central bank assigns greater value to waiting, to avoid the risk of miscalibration. The threshold rule captures this tradeoff: when uncertainty is high (higher RHS), the central bank tolerates larger deviations in inflation or output in period 1.

This setup helps explain why central banks may appear more cautious or slower to act during periods of heightened uncertainty, while also offering a criterion for intervention.

### Shock Persistence and Policy Response

**10. A useful extension and application of the model is to classify shocks along two dimensions: type (demand vs supply) and persistence (temporary vs. persistent).** The policy implications vary depending on which quadrant the shock belongs to. For simplicity and illustrative purposes, consider only the presence of a demand shock with an assumed persistence structure.

Assume an **AR (1)** process for the demand shock:

$$\varepsilon_2 = \rho\varepsilon_1 + \eta, \eta \sim N(0, \sigma_\eta^2)$$

The losses under two regimes can be derived as:

**(a) Act now**

$$L_{\text{act}} = \lambda[(\varepsilon_1 - \phi r_1)^2 + (\rho\varepsilon_1 - \phi r_1)^2 + \sigma_\eta^2]$$

**(b) Wait**

$$L_{\text{wait}} = \lambda\varepsilon_1^2$$

Plug in optimal  $r_1$ , it can be derived that the policymaker prefers to act now if:

$$[1 - \frac{1}{2}(1 - \rho)^2]\varepsilon_1^2 > \sigma_\eta^2$$

This captures two opposing forces:

- **Higher  $\rho$  (shock persistence)** increases the LHS, strengthening the case for acting now.
- **Higher  $\sigma_\eta^2$  (uncertainty)** increases the option value of waiting, making delay more attractive

Similar results can be derived for supply shock. This simple framework offers scenario-based rules of thumb for monetary policy under uncertainty.

Shock Type	Persistence	Threshold Rule Implication	Policy Response
Negative demand shock	Temporary	High threshold; risk of overreaction	Wait and see
Negative demand shock	Persistent	Low threshold: early action avoids cumulative loss	Front-load easing
Negative supply shock	Temporary	Risk of over-tightening; inflation self-corrects	Wait and see
Negative supply shock	Persistent	Gradual, cautious tightening; need to balance policy trade-offs	Gradual tightening

**Effective lower bound (ELB) and policy response.**

**11. The model can also be extended to examine how the risk of hitting an effective lower bound (ELB) could influence the optimal policy response.** This consideration is particularly relevant for Thailand, where the policy rate is currently at a historically low level and concerns have emerged over the need to preserve monetary policy space despite subdued growth.

Assume that in period 2, the policymaker faces the constraint:

$$r_2 \geq \underline{r},$$

where  $\underline{r} \leq 0$  represents the ELB. If the optimal unconstrained policy  $r_2^*$  falls below  $\underline{r}$ , the central bank is forced to set  $r_2 = \underline{r}$ , resulting in a suboptimal outcome.

Suppose the period-2 optimal policy under full information would have been:

$$r_2^* = \frac{1}{\phi} \epsilon_2.$$

Then the probability of hitting the ELB in period 2 is given by:

$$P_{\text{ELB}} = \mathbb{P}(r_2^* < \underline{r}) = \mathbb{P}(\epsilon_2 < \phi \underline{r}) = \Phi\left(\frac{\phi \underline{r} - \rho \epsilon_1}{\sigma_\eta}\right),$$

where  $\Phi(\cdot)$  is the cumulative distribution function of the standard normal distribution.

If the ELB binds in period 2, the central bank incurs an additional loss due to the inability to fully close the gap. The expected second-period loss becomes:

$$\mathbb{E}_1[L_2] = (1 - P_{\text{ELB}}) \lambda (\epsilon_2 - \phi r_2^*)^2 + P_{\text{ELB}} \lambda (\epsilon_2 - \phi \underline{r})^2.$$

**Modified threshold condition with ELB**

**12. The option value of waiting is reduced by the presence of the ELB.** The threshold condition for waiting (versus acting in period 1) becomes:

$$\underbrace{\left[1 - \frac{1}{2}(1 - \rho)^2\right] \epsilon_1^2}_{\text{Benefit of acting}} > \underbrace{\sigma_\eta^2}_{\text{Option value of waiting}} - \underbrace{P_{\text{ELB}} \lambda \mathbb{E}_1[(\epsilon_2 - \phi \underline{r})^2 - (\epsilon_2 - \phi r_2^*)^2]}_{\text{ELB cost}}.$$

The ELB adjustment term on the right-hand side is always positive, reflecting the reduced value of waiting when the ELB binds. Thus, the condition for acting becomes easier to satisfy — the presence of ELB risk strengthens the incentive to act early.

The results suggest that while a persistent negative demand shock already warrants front-loaded easing, the presence of effective lower bound (ELB) risk would further strengthen the case for front-loading monetary accommodation. The inability to respond flexibly in period 2 can justify immediate easing, especially when:

- **$\rho$  is high:** persistent shocks imply that inaction today leads to larger gaps tomorrow.
- **$r$  is high:** the ELB constraint is more likely to bind.
- **$\sigma_\eta$  is high:** future shock uncertainty amplifies the likelihood and cost of hitting the ELB.

### Applying a Scenario-based Strategy in the Context of Thailand

**13. In an environment of elevated uncertainty, a scenario-based strategy offers a practical way for central banks to prioritize and respond to the most pressing risks.** In practice, central banks face substantial complexity and data noise. Trying to monitor and prepare for all possible shocks at once is inefficient. Instead, we propose a scenario-based strategy, where policymakers prioritize monitoring and respond according to the most relevant macroeconomic risks for their own economy.

**14. The key risk scenario for Thailand at the current conjuncture is a persistent weakness to private domestic demand.** Weak income growth and confidence, tightened credit conditions, and ongoing political uncertainty could create a negative feedback loop that perpetuates domestic demand weakness. Household debt remains high, limiting consumption amid sluggish income growth and fragile confidence. Credit standards have tightened, further restraining both consumer and investment activity. Persistent credit constraints may erode borrower confidence and credit quality, reinforcing the downturn. If inflation expectations fall further, rising real debt burdens could add to the drag on demand, amplifying the adverse feedback loop.

**15. In such a scenario, front-loaded monetary easing becomes more optimal.** The New Keynesian framework with an option value of waiting shows that when downside risks are persistent, delayed action can lead to deeper and more protracted output losses. This insight aligns with existing literature on zero lower bound constraints (Eggertsson and Woodford, 2003), which suggests frontloading policy accommodation when the risk of hitting the bound is elevated. However, if the demand weakness is deemed transitory and uncertainty remains high, it may be more prudent to preserve monetary space until clearer signals emerge.

### Monitoring Demand Shocks in Thailand

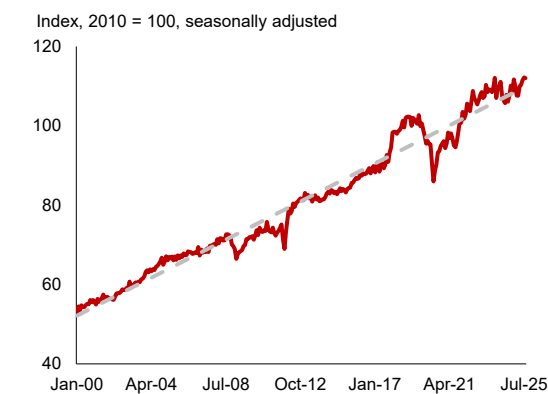
**16. Evaluating this risk requires a systematic approach to monitoring demand-side conditions using timely and targeted indicators.** The Bank of Thailand's Private Consumption and Private Investment Indices, disaggregated by durables vs. non-durables and machinery vs construction, can serve as core indicators for monitoring. External signals such as export orders from PMI surveys and the regional electronics cycle can offer complementary insights into demand momentum.

**17. To extract the underlying demand shock, various methods can be employed.** For illustrative purpose, a simple approach is presented here, following a process of the form:

$$x_t = \mu_t + \varepsilon_t, \quad \varepsilon_t = \phi \varepsilon_{t-1} + u_t$$

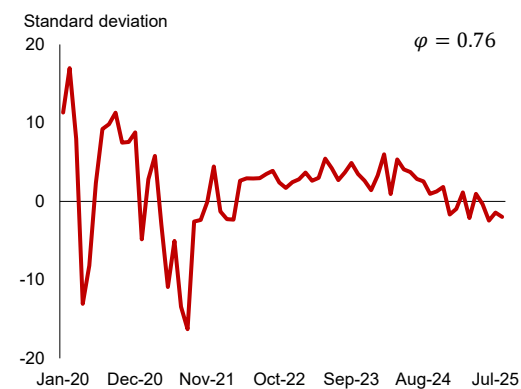
where  $x_t$  denotes the log-level of private consumption or investment,  $\mu_t$  captures the trend or seasonally adjusted level, and  $\varepsilon_t$  is the autocorrelated demand shock with persistence  $\phi$ . The innovation term  $u_t$  reflects sudden changes in demand. This framework allows us to detect persistent deviations from trend, which are more relevant for policy calibration, particularly under heightened uncertainty (Figure A1.1).

**Figure A1.1. Private Consumption Index**



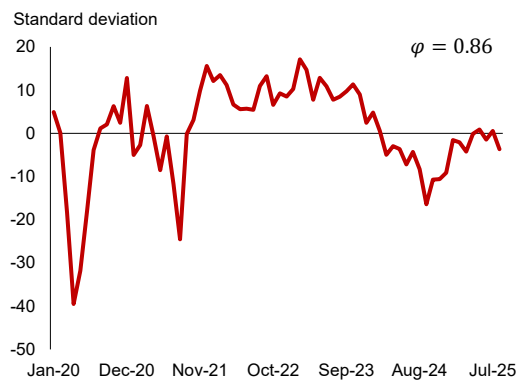
Source: BOT; AMRO staff calculation

**Figure A1.2. Autocorrelated Shocks for Private Consumption Index**



Source: BOT; AMRO staff calculation

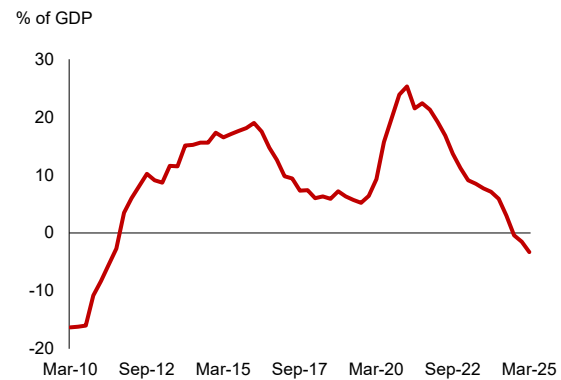
**Figure A1.3. Autocorrelated Shocks for Durables Index**



Source: BOT; AMRO staff calculation

Note: Durables index is the composite index comprising of sales of commercial cars, sales of Passenger cars, and sales of motorcycles.

**Figure A1.4. Credit Gaps**



Source: BIS

**18. Thailand's private consumption, after rebounding to above its pre-COVID trend, has recently fallen below the trendline.** This turning point raises concern that the post-pandemic recovery may be losing steam. The estimated shocks have turned negative in recent months, with persistence coefficient around 0.7–0.8—suggesting the slowdown is relatively persistent (Figure A1.2). The weakness is more pronounced in durable goods consumption, where negative shocks have emerged with high persistence above 0.8 (Figure A1.3). Durables are particularly sensitive to credit availability and forward-looking household sentiment, making them a leading indicator

of consumption trends. If the weakness in durables is sustained, broader domestic demand could weaken further.

**19. These consumption patterns are mirrored in credit dynamics.** Thailand's credit-to-GDP gap has steadily narrowed and recently turned negative (Figure A1.4). This suggests that credit availability is falling behind its historical trend, despite still-elevated household debt levels. Tighter credit in an already leveraged household sector risks reinforcing demand weakness through reduced borrowing and spending.

**20. These signals warrant close monitoring, as persistent negative demand shocks would call for decisive early action.** If demand shocks are both negative and persistent—indicated by sustained declines and high  $\rho_t$  estimates (near 0.8–1)—there is a strong case for proactive easing to preempt a prolonged slowdown that could erode the effectiveness of future policy actions. Conversely, if shocks appear transitory or mild, a wait-and-see approach would be more appropriate, preserving policy space for more severe scenarios. This tailored strategy equips Thai authorities with a simple and transparent framework to guide monetary policy decisions amid high uncertainty and evolving conditions.

## Conclusion

**21. This note proposes a scenario-based strategy to assess whether the Bank of Thailand should act to support growth or wait to preserve policy space,** drawing on a theoretical model that incorporates the option value of waiting. The key consideration is the perceived persistence of the demand shock. In Thailand's case, where inflation remains subdued and domestic demand continues to weaken, there are signs that a prolonged shortfall may be unfolding. This note uses a simple method to assess the persistence of demand weakness for Thailand in the recent period. While illustrative rather than definitive, the analysis shows that private demand weakness has been persistent and thus provides a justification for the current policy easing stance by the Bank of Thailand. If weakness persists further, our analysis suggests there would be a strong case for further easing.

**22. Frontloading of easing makes sense amid persistent demand weakness.** If the central bank delays action despite limited space, cumulative output losses could build, reinforce weak sentiment, and accelerate the downturn—raising the likelihood of hitting the lower bound sooner. Acting early may slow this spiral and better anchor expectations. Of course, judgment should remain data-driven, and ongoing assessment of key data is essential to ensure timely and well-informed policy action.

## References

- Eggertsson, Gauti B., and Michael Woodford. 2003. *The Zero Bound on Interest Rates and Optimal Monetary Policy*. Brookings Papers on Economic Activity, 2003(1): 139–211.
- Ng, Allen, and Haobin Wang. Forthcoming. Monetary Policy under High Uncertainty: Demand and Supply Shocks and the Option Value of Waiting. AMRO Working Paper, ASEAN+3 Macroeconomic Research Office, Singapore.



## 2. Debt Sustainability Analysis<sup>28</sup>

Thailand's debt sustainability risks have increased, reflecting elevated fiscal deficits from recent stimulus measures and a slower-than-expected economic recovery, which have pushed public debt close to the legal ceiling of 70 percent of GDP. Gross financing needs also remain high, approaching the 15 percent of GDP threshold. Narrowing fiscal space has constrained the government's ability to respond to shocks and invest in long-term development. Nevertheless, Thailand's favorable debt profile and strong track record of fiscal discipline help mitigate risks, which can ease further with sustained commitment to fiscal consolidation. The authorities are advised to strike a careful balance between near-term support and medium-term consolidation, anchored by credible revenue and expenditure reforms.

### Background

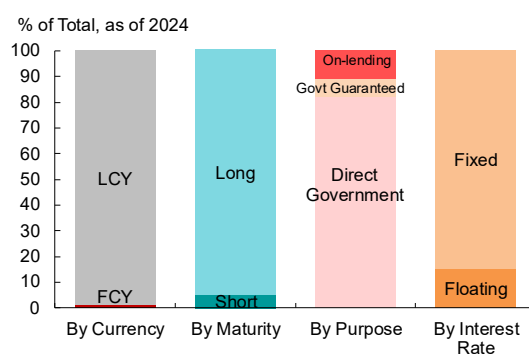
#### 1. Public debt and gross financing needs are projected to rise further in the near term, reflecting continued fiscal expansion and higher debt servicing costs.

Public debt is expected to increase from 63.2 percent of GDP in FY2024 to 65.6 percent in FY2025, peaking at above 69 percent by FY2028, just below the statutory ceiling. The debt buildup is driven by persistent primary deficits and high interest payments, while economic growth moderates in the short term. Gross financing needs (GFNs) are projected to remain elevated at around 14 percent of GDP in FY2025–2029 due to higher debt service obligations and ongoing deficit financing.

#### 2. Thailand's public debt is predominantly domestic and long term in nature.

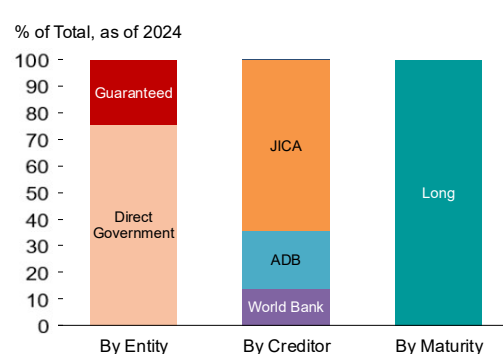
As of 2024, local-currency debt accounts for 99.2 percent of total public debt, with 96 percent in long-term instruments (Figure A2.1). Direct government debt dominates, allowing stronger control over debt management, while the smaller portion of guaranteed and on-lent debt helps contain SOE-related contingent liabilities. The debt portfolio is largely insulated from interest rate volatility, as most borrowing is on fixed-rate terms. External debt consists entirely of long-term direct government borrowing, mainly from JICA, ADB, and the World Bank, helping to mitigate near-term refinancing pressures (Figure A2.2).

Figure A2.1. Public Debt Structure



Source: PDMO, TMOF; and AMRO staff estimates.

Figure A2.2. Public External Debt Structure



Source: PDMO, TMOF; and AMRO staff estimates.

Note: (1) External debt refers to debt denominated in foreign currency. (2) Long-term debt refers to borrowings with an original maturity exceeding one year.

<sup>28</sup> Prepared by Ravisara Hataiseree.

## Macroeconomic and Fiscal Projections

**3. Baseline macro-fiscal projections assume a gradual recovery in growth and fiscal consolidation over the medium term.** Growth in 2025–26 is expected to remain below pre-pandemic levels due to projected weaker external demand and persistent weakness in domestic demand. GDP growth is projected to moderate in the near term before gradually improving toward its medium-term potential, with the negative output gap narrowing and closing after 2026. The GDP deflator is projected to stabilize as price pressures remain contained. The higher near-term effective interest rate partly reflects early debt repayments and is assumed to decline gradually over the medium term. The primary deficit is projected to average 1.9 percent of GDP in FY2025–29, broadly returning to its pre-pandemic level, under a gradual fiscal consolidation path. The pace of consolidation is expected to remain moderate, as revenue reforms are limited under the baseline and near-term stimulus is expected to keep expenditure elevated (Table A2.1).

**Table A2.1 Macroeconomic and Fiscal Indicators**

	2019	2020	2021	2022	2023	2024	2025p	2026p	2027p	2028p	2029p
<b>Macroeconomic indicators (%)</b>											
Real GDP growth	2.8	-4.7	0.0	2.7	1.9	2.2	2.2	1.9	2.6	2.9	3.1
GDP deflator	1.1	-0.8	0.8	4.2	2.3	0.8	1.7	1.7	1.7	1.7	1.7
Effective interest rate	2.2	2.2	2.2	2.0	1.8	1.9	3.0	3.0	2.9	2.8	2.8
<b>Fiscal indicators (% GDP)</b>											
Revenue	15.3	15.0	14.8	14.8	14.9	15.2	15.1	15.0	15.0	15.0	15.0
Expenditure	18.1	20.0	20.1	18.4	18.3	19.3	19.6	19.1	18.6	18.3	18.0
Fiscal balance	-2.8	-4.9	-5.2	-3.6	-3.3	-4.0	-4.5	-4.1	-3.7	-3.4	-3.1
Fiscal balance (including off-budget COVID spending)	-2.8	-7.1	-9.0	-5.9	-3.3	-4.0	-4.5	-4.1	-3.7	-3.4	-3.1
Primary balance	-1.9	-4.0	-4.1	-2.5	-2.3	-2.9	-2.7	-2.2	-1.8	-1.5	-1.3
Public debt	41.1	49.4	58.4	60.5	62.3	63.2	65.6	67.1	68.4	69.1	68.9
Gross financing needs	6.3	8.4	12.2	10.2	11.5	13.3	13.4	14.0	13.6	13.7	13.5

Source: TMOF; AMRO staff estimates

Note: The macroeconomic and fiscal indicators for 2025–2029 are based on AMRO staff estimates and projections.

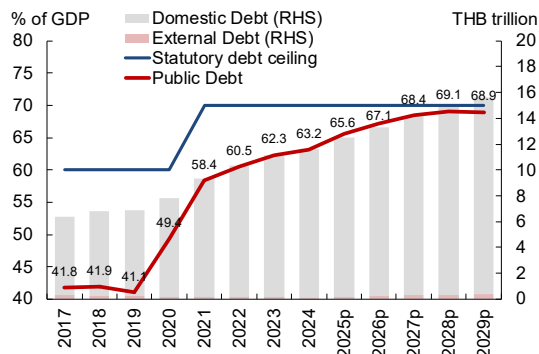
## Baseline Debt and GFN Projections

**4. Thailand's public debt is projected to rise over the medium term, as fiscal deficits remain well above pre-pandemic levels and consolidation is delayed under the baseline.** This is due to limited major tax reforms and, more recently, short-term expenditure increases related to the digital wallet and fiscal stimulus measures in FY2024–2025. While continued GDP growth provides some relief as the negative output gap narrows, these factors are insufficient to offset the impact of elevated primary deficits and rising interest payments. As a result, public debt is projected to rise to 65.6 percent of GDP in FY2025 and reach 69.1 percent in FY2028 (Figure A2.3). Economic recovery and fiscal consolidation are expected to contribute to moderating growth in public debt over the medium term (Figure A2.4).

**5. Higher debt service and deficits are expected to keep GFNs elevated amid relatively weak growth.** The government's GFNs nearly doubled from an average of 6.2 percent of GDP in FY2015–2019 to 11.1 percent in FY2020–2024 and are projected to remain elevated at around 14 percent during FY2025–2029 (Figure A2.5 and A2.6). Despite relatively small external amortization, fiscal deficits and domestic debt repayments will keep GFNs near the 15 percent indicative threshold for emerging

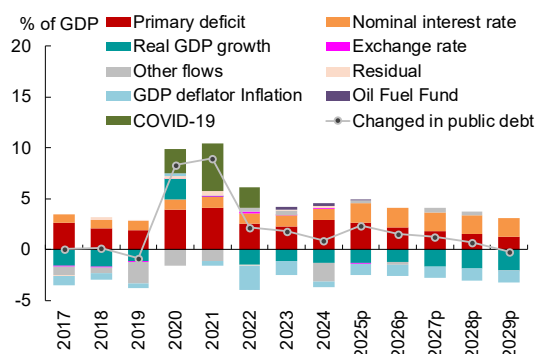
markets.<sup>29</sup> Nevertheless, domestic financial conditions remain stable, supported by Thailand's well-developed bond market and deep domestic liquidity.

Figure A2.3. Public Debt



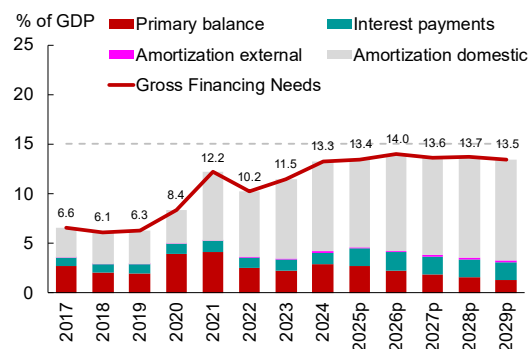
Source: TMOF; AMRO staff estimates

Figure A2.4. Public Debt Dynamics



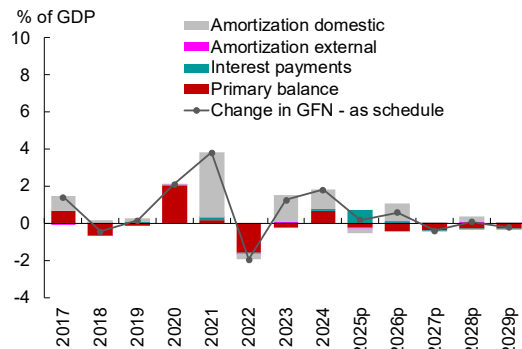
Source: TMOF; AMRO staff estimates

Figure A2.5. Gross Financing Needs



Source: TMOF; AMRO staff estimates

Figure A2.6. GFN Dynamics



Source: TMOF; AMRO staff estimates

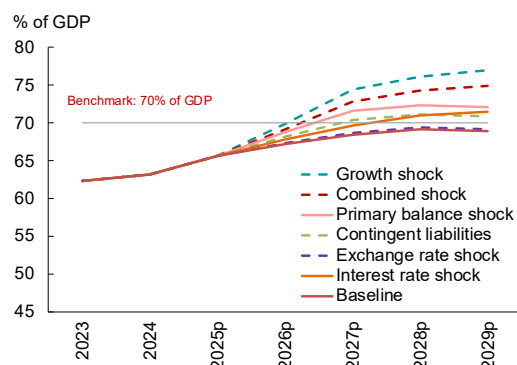
## Macro-Fiscal Risks – Stress Tests

**6. The public debt-to-GDP ratio is likely to breach the 70 percent threshold under most macro and fiscal shocks, while GFNs are sensitive to growth and primary balance shocks.**<sup>30</sup> Debt dynamics are particularly sensitive to growth, primary balance, interest rates, and contingent liabilities (Figure A2.7). A slowdown in growth, driven by weaker-than-expected domestic or external demand, could significantly push up the debt and GFN trajectory. Delays in reprioritizing expenditure toward growth-enhancing areas and setbacks in tax reforms could further weaken the primary balance, increasing the debt ratio in the medium term and pushing GFNs above the indicative threshold in the near term (Figure A2.8). Rising debt and debt servicing costs are also vulnerable to interest rate shocks, which could significantly raise the debt to-to-GDP ratio. Continued reliance on quasi-fiscal operations, primarily agricultural price support, could pose additional contingent liability risks.

<sup>29</sup> According to the IMF-WB DSA for Market Access Countries (MAC) (2013), the GFN threshold in percentage of GDP for emerging markets is 15.0 percent.

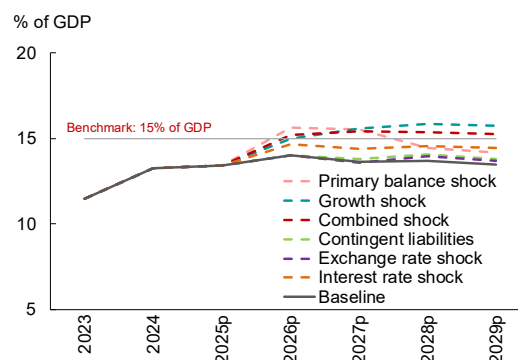
<sup>30</sup> The scenarios for the stress test are: 1) Real GDP growth shock: -2.6 percentage point shock in 2026-2027; 2) Primary balance shock: -1.4 percent of GDP shock in 2026-2027; 3) Interest rate shock: +1 percentage points shock from 2026; 4) Exchange rate shock: +1.6 percentage points shock in 2026-2027; 5) Contingent liabilities: +1 percentage point in 2026-2027; 6) Combined shock: combination of growth, primary balance, interest rate, with half size of individual shocks articulated in 1) – 4).

Figure A2.7. Public Debt Stress Test



Source: TMOF; and AMRO staff estimates.

Figure A2.8. GFNs Stress Test

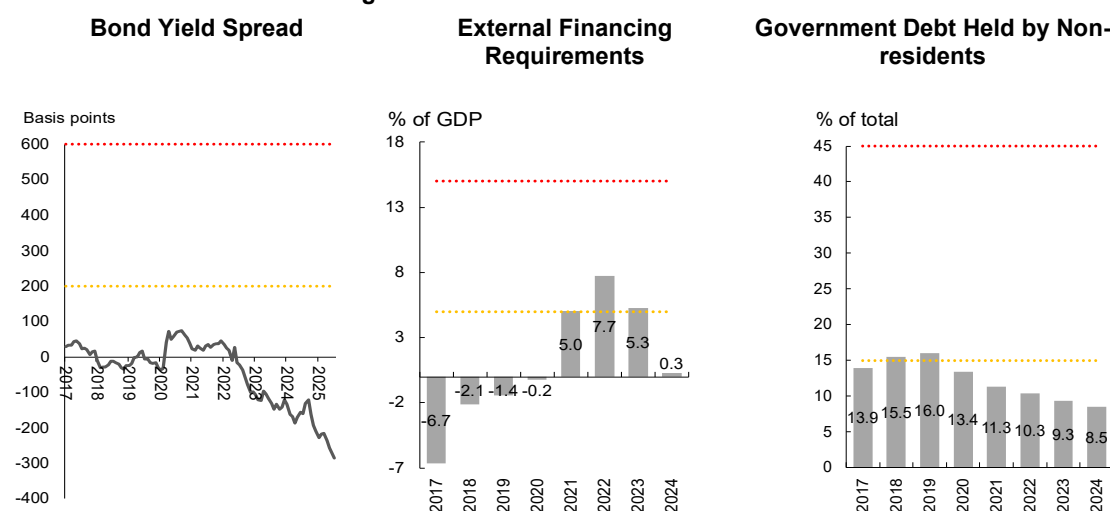


Source: TMOF; and AMRO staff estimates.

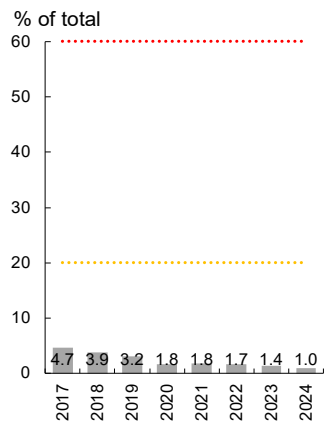
### Market Perception of Risk and Debt Profile Vulnerabilities

**7. Thailand's sovereign risk remains contained despite rising public debt, although recent rating outlook downgrades by credit rating agencies highlight growing fiscal vulnerabilities.** As of 2024, Thailand's bond spreads and debt vulnerability indicators all remain below early warning thresholds (Figure A2.9). The negative 10-year bond yield spread against the U.S. Treasury reflects investor confidence and stable macroeconomic conditions. Modest external financing needs, lower share of foreign-currency and short-term debt, and declining nonresident holdings strengthen resilience to external shocks. The country's internal fiscal commitments remain within prudential thresholds, reflecting prudent debt management, while quasi-fiscal activities have moderated (Figures A2.10 and A2.11). Nonetheless, fiscal vulnerabilities are rising as public debt nears the statutory ceiling amid persistent deficits, higher debt servicing obligations, and weak revenue growth. A commitment to fiscal consolidation and well-targeted stimulus would help restore fiscal space and alleviate market concerns over Thailand's fiscal position.

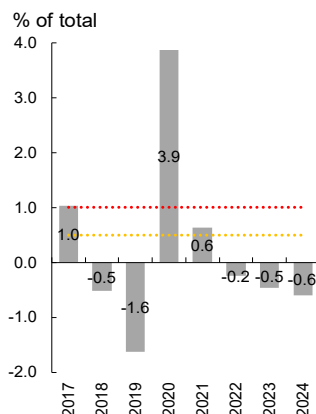
Figure A2.9. Debt Profile Vulnerabilities



**Government Debt in Foreign Currency**



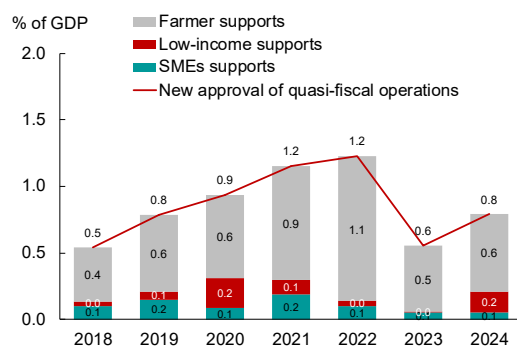
**Changes in Short-term Debt Share**



Source: National authorities via CEIC, TMOF.

Note: 1) -- Lower early warning (25.0 percent of the benchmark), -- Upper early warning (75.0 percent of the benchmark). See IMF (2013) for a detailed discussion; 2) Bond yield spreads are computed by the difference between the Thai Government Bond Yield Curve 10 Years and the U.S. Treasury Notes Yield 10 Years; 3) External financing requirements = current account deficit + amortization of public external ) debt + amortization of private external debt; 4) Public debt held by nonresidents is based on the jurisdiction of issuance; 5) Public debt denominated in non-local currency; 6) Short-term debt is based on the debt instrument.

**Figure A2.10. Quasi-fiscal Operation**



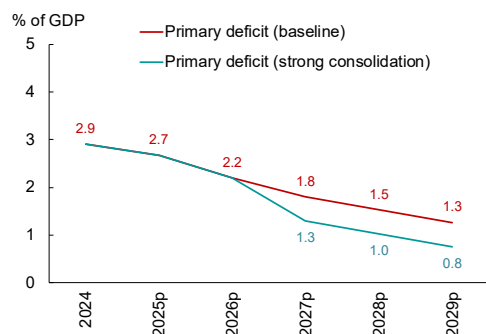
Source: TMOF; AMRO staff estimates

**Figure A2.11. Public Debt Management in FY2024**

Index	Fiscal Commitments	FY2024 (Percent)
<b>Expenditure rule</b>		
1	Capital expenditure to total expenditure: $\geq 20$ percent	20
2	Principal repayment to total expenditure: 2.5-4.0 percent	3.3
3	Fiscal liability from quasi-fiscal activities of expenditure: $\leq 32.0$ percent	29.0
4	Interest payment to revenue: $\leq 10$ percent	7.51
<b>Debt rule</b>		
1	Public debt to GDP: $\leq 70.0$ percent	63.2
2	Debt service to revenue: $\leq 50.0$ percent	35.1
3	Foreign debt to total public debt $\leq 10.0$ percent	1.0
4	Foreign currency debt service to exports: $\leq 5.0$ percent	0.05

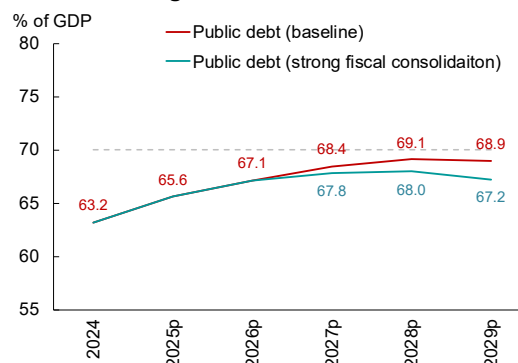
Source: TMOF; AMRO staff estimates

**Figure A2.12. Primary Balance: Stronger Consolidation Scenario**



Source: TMOF; AMRO staff estimates

**Figure A2.13. Public Debt: Stronger Consolidation Scenario**



Source: TMOF; AMRO staff estimates

## Overall Assessment

**8. Thailand’s public debt sustainability risk is assessed to be moderate, as a favorable debt profile helps mitigate rising vulnerabilities amid weaker growth and slowed consolidation.** This underscores the need for a more ambitious medium-term strategy to reduce debt faster and rebuild fiscal space. While the risk of sovereign stress remains low, Thailand faces growing fiscal challenges with policy space narrowing and debt ratios approaching thresholds (Table A2.2). Under the baseline, the primary deficit is projected to average 1.5 percent of GDP in FY2027–2029. A stronger consolidation path—with a reduced primary deficit of 1.0 percent—would allow public debt to peak at the lower level and decline more rapidly (Figure A2.12 and A2.13). This scenario should be supported by the implementation of tax reforms measures and robust expenditure measures, including improved investment efficiency and rationalized spending, to achieve the planned revenue expansion and expenditure normalization. To ensure debt sustainability and rebuild fiscal buffers, authorities are advised to balance near-term support with credible medium-term consolidation, anchored by tax and expenditure reforms and strengthened oversight of quasi-fiscal operations within a robust fiscal framework.

**Table A2.2. Heatmap of Public Debt Sustainability**

		2019	2020	2021	2022	2023	2024	2025p	2026p	2027p	2028p	2029p
Public Debt												
Gross Financing Needs												
Debt Profile	Bond Yield Spread											
	External Financing Requirements											
	Debt Held by Non-residents											
	Debt in Foreign Currency											
	Changes in Short-term Debt Share											

Source: AMRO staff estimates.

Note: 1) For Public Debt and Gross Financing Needs, the cell is highlighted in green if the benchmark is not exceeded under any shocks or the baseline, yellow if it is exceeded under any specific shock but not the baseline, and red if it is exceeded under the baseline; 2) For Debt Profile, the cell is highlighted in green if the country value is less than the lower early warning benchmark, red if it exceeds the upper early warning benchmark, and yellow if it is between the lower and upper early warning benchmarks.

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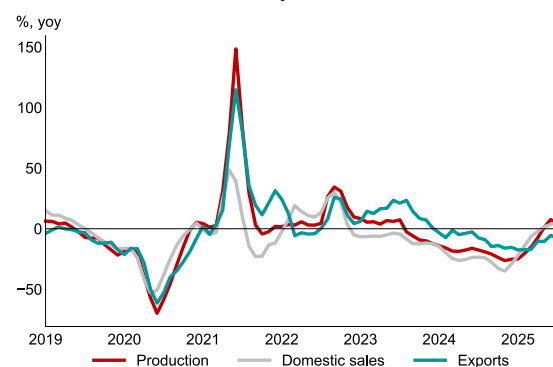
### 3. Thailand's Automotive Sector at a Crossroads: Managing the Transition to EVs<sup>31</sup>

Thailand's automotive sector is undergoing an important structural shift. As the global transition from internal combustion engine (ICE) vehicles to EVs gains pace, Thailand—Southeast Asia's leading auto manufacturing and export hub—faces both new opportunities and short-term challenges. Policy efforts under through incentive programs have successfully attracted foreign direct investment and positioned the country as a growing EV production base. On the other hand, the transition has also resulted in challenges, including weaker domestic value-added linkages, labor market disruptions, and a reduced short-run contribution of the sector to GDP. This Selected Issue examines the recent development of the sector and the potential macroeconomic implications of Thailand's EV transition, highlighting the need for timely, inclusive, and forward-looking policies to manage the transition.

#### Thai Automotive Sector in Transition

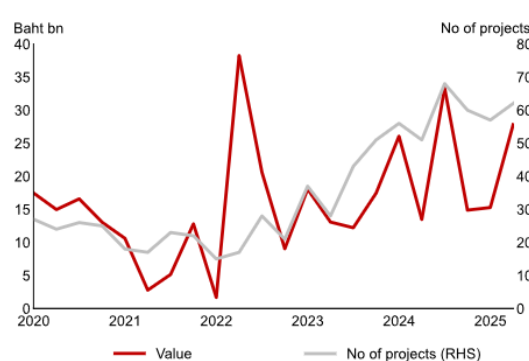
**1. Thailand has long been the Southeast Asia's automotive hub, but faces growing challenges.** Thailand's automotive sector has long been a pillar of the economy, with the country evolving from an assembly-focused base in the 1980s to a globally competitive exporter of vehicles and parts. The sector accounted for more than 10 percent of GDP, employing over half a million people, and serving as a key driver of exports, investment, and private consumption. The sector's recovery has been sluggish in the aftermath of the COVID-19 pandemic. Notably, both vehicle production and investment contracted sharply in later 2023 and 2024, weighed down by a combination of structural headwinds and cyclical factors (Figure A3.1).

**Figure A3.1. Motor Vehicle Production, Sales and Exports**



Source: The Federation of Thai Industries.

**Figure A3.2. FDI Application Approvals in Automotive Sector**



Source: The Board of Investment Thailand.

**2. Facing the changing landscape of competition, Thailand has embarked on a strategic transformation to position itself as a leading global hub for EV production.** A defining trend reshaping the landscape is the ongoing transition from ICE vehicles to EVs. This transformation is being propelled not only by intensifying global decarbonization imperatives but also by Thailand's strategic ambition to upgrade its industrial base and sustain its regional leadership in the auto sector. Under the government's "30@30" vision—which targets 30 percent of domestic vehicle production to be EVs by 2030—policymakers have introduced a wide-ranging set of

<sup>31</sup> Prepared by Xianguo Huang, Senior Economist.



initiatives to accelerate this transition and address emerging challenges. Measures among these include EV subsidy programs, investment incentives, aiming at stimulating demand and attracting FDI. These measures have led to a noticeable pickup in EV-related activity—accompanied by rising EV imports since 2022 and a growing pipeline of foreign investment commitments to establish local production facilities (Figure A3.2). Looking ahead, domestic EV manufacturing is expected to gain further traction in 2025–2026 as these investments begin to materialize.

**3. EV 3.0 and EV 3.5, two major policy packages that are central to Thailand’s EV strategy, have provided a phased roadmap to build a comprehensive EV ecosystem.** The EV 3.0 program (2022–2023) focused on jumpstarting domestic demand through upfront purchase subsidies, import duty and excise tax reductions, and a 1:1 local production requirement (i.e., one locally produced EV for every imported unit). EV 3.5 (2024–2027) builds on this foundation by shifting the focus toward industrial deepening and localization. It introduces a phased tightening of local production ratios—rising to 2:1 in 2026 and 3:1 in 2027—and adds more stringent eligibility criteria for participating firms, including compliance with domestic product standards and increased technical documentation. The policy framework emphasizes broader local content obligations and encourages domestic higher-value addition through aligned tax incentives. EV 3.5 also broadens support to cover commercial EVs, such as trucks and buses, reflecting a transition from market seeding to industrial upgrading.

**4. These coordinated policy efforts have had tangible impacts—both in stimulating domestic EV adoption and in attracting major global manufacturers to invest in local operations.** A growing number of EV makers have entered the Thai market, initially relying on imports to meet rising demand, but increasingly shifting toward local assembly in response to policy incentives and production requirements. Thailand has also begun to emerge as an EV export base, albeit from a low starting point (Figure A3.3). For instance, a major EV player from China began exporting from its Thai manufacturing facility in August 2025, marking a key milestone in Thailand’s integration into regional EV supply chains. As more production lines come online the country’s EV export capacity is expected to expand significantly over the coming years.

Figure A3.3. EV Exports

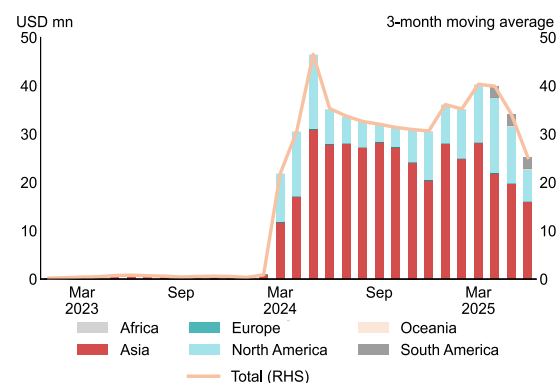
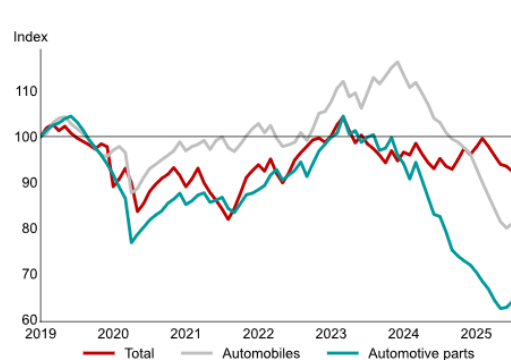


Figure A3.4. Industrial Sentiment



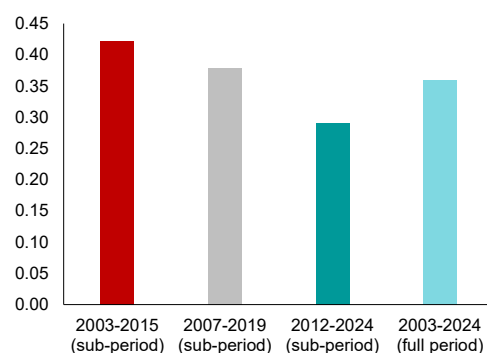
**5. However, the transition has not been without significant frictions.** The structural shift away from ICE technologies has placed significant pressure on traditional auto parts suppliers—particularly SMEs embedded in legacy value chains. Many of these firms are specialized in manufacturing components that are no longer required in EV production, such as engines, transmissions, and exhaust systems. As a result, they have experienced a sharp decline in orders and face growing uncertainty about their future viability. These challenges are compounded by sluggish domestic demand, as auto sales have remained soft amidst heightened household debt and uneven export performance due to global headwinds and intense competition. Together, they have weighed on business confidence as shown in persistently weak industrial sentiment (Figure A3.4).

**6. These developments highlight the dual nature of Thailand’s EV transition: a medium-term opportunity but also a near-term disruption.** The long-run gains—industrial upgrading, green growth, and enhanced global competitiveness—are widely acknowledged. Yet the short-term adjustment costs, including job displacement, uneven supply chain adaptation, and capital reallocation, are substantial and merit closer policy attention.

#### Assessing the Impact of the Transition

**7. To assess the short-run implications of the automotive sector’s transition to EVs, an empirical exercise is conducted based on a growth elasticity framework.** Specifically, the analysis estimates the elasticity of real GDP growth with respect to a composite indicator of automotive sector activity ( $X_t^{auto}$ ), using a quarterly regression model that controls for both domestic and external macroeconomic conditions. The core explanatory variable  $X_t^{auto}$  is a sectoral activity index constructed via Principal Component Analysis (PCA), drawing from three key indicators: vehicle production, domestic vehicle sales, and automotive exports. This index captures the common underlying trends across these dimensions and serves as a summary measure of overall sectoral dynamics, and  $D_t^{ev}$  helps to the interaction term capturing differential impact.

**Figure A3.5. Elasticity of Real GDP Growth to the Auto Sector**



Source: AMRO staff estimates

Note: p-value smaller than 0.01 for all estimates above.

**Table A3.1. Regression Results with EV Transition**

Variable	HAC	Bootstrap
$\alpha$	0.6319***	0.6319***
$X_t^{auto}$	0.3902***	0.3902***
$X_t^{auto} \times D_t^{ev}$	-0.3177**	-0.3177*
$x_{1,t}^d$	0.0802	0.0802
$x_{2,t}^d$	-0.2441**	-0.2441***
$x_{3,t}^d$	-0.3307	-0.3307
$x_{1,t}^g$	0.3247***	0.3247*
$D_t^{covid}$	-1.1711***	-1.1711

Source: AMRO staff estimates

Note: The list of variables includes a constant term, the automotive sector index, an interaction term for the EV transition, consumer confidence, the household debt-to-GDP ratio, the interest rate, world real GDP, and a COVID-19 dummy variable.

**8. The results confirm that Thailand's automotive sector remains a macro-critical driver of real GDP growth, but its contribution has moderated in recent years.** Sub-period analysis reveals a declining elasticity over time, coinciding with the onset of structural transformation in the sector (Figure A3.5). In particular, the inclusion of an interaction term for the 2022–2024 EV transition period indicates a statistically significant weakening of the sector's GDP impact during this phase, suggesting potential transitional frictions and the overall positive impact from the automotive sector has declined (Table A3.1).

#### Safeguarding the Transition Path

**9. The structural shift from ICE to EV technologies is reshaping Thailand's automotive value chain.** At the center of this transformation lies the move toward simpler EV architectures that require fewer components and are less reliant on traditional tier-2 and tier-3 suppliers. This shift has weakened domestic value-added linkages and triggered disruptions—particularly among SMEs and workers whose skills are tied to legacy ICE production. The adjustment burden has been particularly acute for smaller suppliers and mid-skilled labor, underscoring the urgent need for targeted support to preserve productive capacity and mitigate worker displacement.

**10. Policy-driven acceleration has helped seize emerging opportunities, but short-run frictions require proactive management.** Thailand's EV 3.0 and 3.5 incentive programs have successfully fast-tracked the transition, helping the country capture a critical window of opportunity. These policies have spurred a wave of foreign direct investment, particularly from Chinese automakers, and positioned Thailand as a rising EV production base. However, the rapid pace of change has also intensified adjustment pressures on incumbent firms, workers, and legacy supply chains. If poorly managed, these frictions risk undermining the sector's short-term contribution to growth. Yet delaying the transition could likely be even more costly, potentially resulting in a permanent loss of competitiveness, investment, and supply chain integration to more proactive regional peers over the longer term.

**11. An inclusive and coordinated policy framework could be further strengthened to support those most affected by the transition.** While EV 3.0 and 3.5 have laid a strong foundation, industrial and labor policies must evolve in tandem with the structural shift. Key areas of focus include scaling up reskilling and upskilling programs for displaced workers, establishing transition funds to support vulnerable SMEs, and providing tailored financing and technical assistance to help firms adapt to new production technologies and standards. Proactive support is essential—not only to cushion short-term disruptions, but also to build long-run resilience and competitiveness across the value chain.

**12. In conclusion, Thailand's EV transition marks more than just a sectoral shift—it represents a structural inflection point for the broader economy.** The transition touches multiple dimensions of economic development and can potentially redefine the country's comparative advantage in global value chains. As the automotive sector accounts for a large share of GDP, exports, and manufacturing employment, the transition from ICE to EVs has cascading effects across upstream suppliers, the workforce and investment flows. The short-run frictions—such as dislocated SMEs, lagging demand, and adjustment costs—are real but manageable. Yet the long-term gains in investment, technological upgrading, and integration into the future mobility ecosystem are substantial—particularly if Thailand aims to retain its

leadership as Southeast Asia's automotive hub. With timely, coordinated, and inclusive policies, the country has a narrow but critical window to convert this transformation into a broader engine of productivity, innovation, and sustainable growth.

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