Economic Risks, Financial Stability & Resilience

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Presentation @National Uuniversity of Management, Cambodia

April 24, 2026

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Section 1

Literature Review:
Financial Stability & Resilience

What Is Financial Stability?

Core Definition — Schinasi (2004, IMF WP/04/187)

A financial system is stable when it can **facilitate economic processes, manage risks, and absorb shocks** without material disruption to resource allocation and risk management functions.

Key insight from the literature:

- Stability is a **continuum**, not a binary state (Allen & Wood, 2006, *JFS*)
- The goal is **resilience to shocks**, not zero volatility
- Maintaining **confidence** in the system is a prerequisite (Crockett, 1997, BIS)

Systemic Risk: How Crises Spread

Three main transmission channels:

- **Network contagion** — distress at one institution propagates through interbank linkages
  Allen & Gale (2000, *JPE*): incomplete networks amplify shocks
- **Liquidity spiral** — falling asset prices force sales, depressing prices further
  Brunnermeier & Pedersen (2009, *RFS*): market & funding liquidity reinforce
- **Procyclicality** — risk builds silently in booms, unwinds catastrophically in busts
  Borio (2003, BIS WP 128): intellectual foundation of macroprudential policy

Credit Booms: The Crisis Predictor

Schularick & Taylor (2012, *AER*) analyzed data spanned for 140 years, 14 economies

Credit expansion is the **single best predictor** of banking crises. The more excessive the boom, the deeper the recession that follows.

- **1 in 3** credit booms have ended in a crisis (Dell'Ariccia et al., 2012, IMF SDN/12/06)
- Recessions after credit-boom crises are **deeper and longer** (Jordà, Schularick & Taylor, 2013, *JMCB*)
- Common precursors: capital inflows, rising asset prices, currency appreciation (Mendoza & Terrones, 2008, NBER)

Credit/GDP in Cambodia

127.8%	24%	×5.6
2025	2010	Increase in 13 years

Financial Inclusion & Stability: The Theoretical Relationship

What is Financial Inclusion?

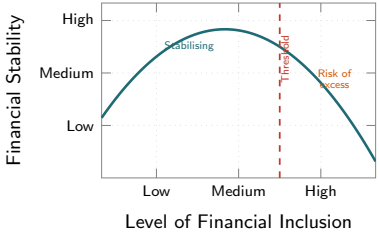
Access to and usage of **formal financial services** — savings, credit, payments, insurance — in a timely, affordable manner with adequate consumer protection.

NBC / NFIS 2019–2025; World Bank Global Findex

Why it links to stability:

- Broader deposit base ⇒ **more stable funding** for banks; less reliance on volatile wholesale funding (Han & Melecky, 2013, World Bank)
- More inclusive credit ⇒ **diversified loan portfolios**; less concentration risk
- Greater inclusion ⇒ **smoother monetary policy transmission** via larger formal sector (Mehrotra & Yetman, 2015, BIS)

The Non-Linear Relationship



Sebai et al. (2025, *Finance Research Letters*): panel smooth transition regression in 26 developing countries — U-shaped relationship confirmed.

Cihák et al. (2020, *The World Bank Research Observer*): Deposit Financial Inclusion stabilizes in well-developed systems but amplifies risk in weakly governed environments.

How Financial Inclusion Can Both Stabilise & Destabilise

Channel	Stabilising Effect	Destabilising Risk
Deposit base	Broader household deposits reduce reliance on volatile wholesale funding; dampens bank runs (Han & Melecky, 2013)	Large retail deposits can trigger **coordinated digital runs** faster than traditional bank runs
Credit expansion	Portfolio diversification across many small borrowers reduces concentration risk	Rapid credit to under-served, high-risk borrowers inflates NPLs — **Cambodia's MFI PAR30+ reached 8.7%** (2024)
Insurance & savings	Formal buffers reduce household vulnerability; dampen pro-cyclical spending (Salignac et al., 2019)	**Near-zero insurance coverage** in Cambodia (1% of households) leaves most shocks unmitigated

Cihák, Mare & Melecky (2020) — World Bank Findex Cambodia Key Findings (Apr 2025)

Digitalization & Financial Stability

Stabilising Channels

- **Information asymmetry reduction:** Big data and ML improve credit scoring, reduce adverse selection and NPLs (Berg et al. 2020; Yang & Masron 2024)
- **Reduced settlement risk:** RTGS/blockchain eliminates intraday interbank credit exposure; Bakong operates on this model (BIS CPMI 2003; BIS QR Mar 2017)
- **Bank efficiency gains:** Digital transformation reduces costs, improves profitability and capital buffers (He, et al., 2025, Financial Research Letter)

Destabilising Risks

- **Cyber & operational risk:** Financial sector is **3× more at risk** of cyber-attack than other sectors; 4 major RTGS outages 2014–2021 (Khiaonarong, et al., 2021,IMF WP/21/288)
- **Concentration / TCTF risk:** Single platform failure freezes entire system; new "too-critical-to-fail" nodes emerge (IMF FAS Annual Report 2025)
- **Faster digital bank runs:** Mobile apps allow deposits to drain in minutes; speed amplifies contagion vs. physical runs (IMF FinTech Note 2023)
- **Regulatory lag:** Digitalization outpacing supervisory capacity undermines stability in low-governance settings (Cihák et al. 2020)
- **Over-indebtedness:** Easy digital credit access inflates household debt and NPLs without adequate safeguards (Cevik 2024, Int. Rev. Econ.)

Section 2

Case Studies of Major Financial Crises

Asian Financial Crisis (1997–1998)

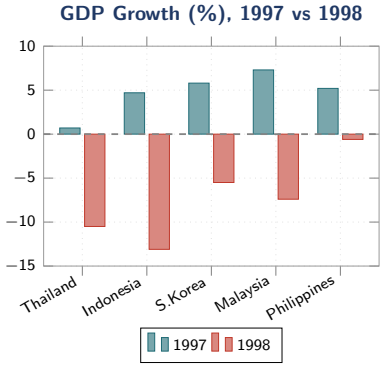
What happened

- Thailand floated the baht — 2 July 1997
- Contagion spread to Indonesia, Korea, Malaysia
- Fixed pegs + short-term USD debt = fatal mix
- IMF packages: **US$118 billion** total

Consequences

- Indonesia GDP: −13.1% (1998)
- Korean won: −50% vs USD
- NPLs peaked at ∼**45%** in Thailand

Corsetti, Pesenti & Roubini (1999, JWEO)



Source: World Bank WDI; IMF WEO Historical

Global Financial Crisis (2007–2009)

Root causes

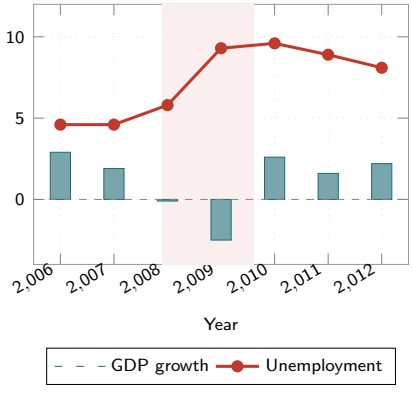
- US$2 trillion subprime lending (2006 alone)
- MBS / CDO securitisation hid risk
- Lehman Brothers collapsed — 15 Sep 2008
- Shadow banking entirely unregulated

Scale of the damage

−4.3%
US GDP peak-to-trough

10.0%
US Unemployment peak

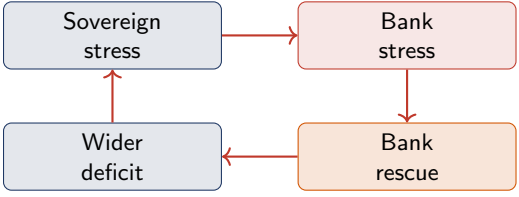
US GDP Growth vs Unemployment (%)



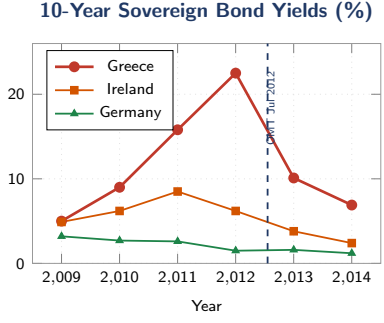
Source: US BEA; Bureau of Labor Statistics

Eurozone Sovereign Debt Crisis (2010–2012)

The diabolic loop

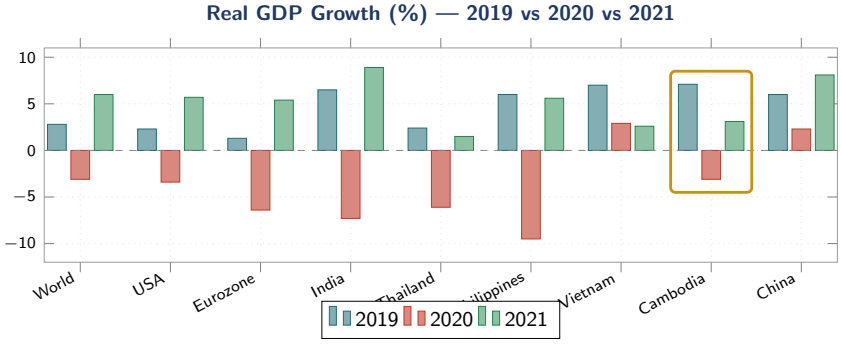


- Greece GDP: −26% cumulative
- Unemployment: **27.5%**
- Draghi "whatever it takes" — Jul 2012
- Lesson: monetary union needs fiscal union



Source: ECB Statistical Data Warehouse; Eurostat

COVID-19 Shock (2020) — A Global Synchronised Recession



Cambodia's first recession since 1994

Source: IMF World Economic Outlook, 2021

Sri Lanka 2022 — A Warning for Small Open Economies

Why it happened

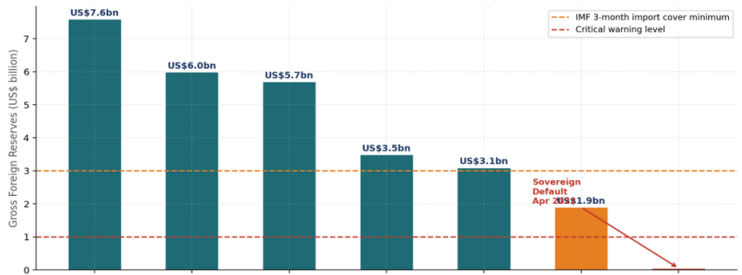
- 2019 tax cuts: lost 2% of GDP revenue
- COVID destroyed tourism receipts
- 2021 fertiliser ban crashed crop yields
- Monetary financing of deficits
- Denied crisis until reserves ran out

Consequences

- Peak inflation: **69.8%**
- GDP 2022: −7.8%
- Sovereign default — April 2022
- IMF EFF: US$2.9bn (Mar 2023)

IMF Country Report No. 23/116

Figure 13 — Sri Lanka: Foreign Reserve Collapse Leading to Sovereign Default (2019–2022)
US$7.6bn (2019) → US$50M usable at default; inflation peaked at 69.8%



Sources: Central Bank of Sri Lanka, Annual Reports; IMF, Article IV (Country Report No. 23/116); Khor & Lim (2022) ISEAS–Yusof Ishak Institute

Five Crises — Five Lessons

Crisis	Peak GDP Impact	Lesson
Asian 1997	Indonesia -13.1%	Build reserves; float exchange rates
GFC 2008	US -4.3% (peak–trough)	Regulate shadow banking
Eurozone 2010	Greece -26% cumulative	Monetary union needs fiscal union
COVID 2020	World -3.1%	Fiscal space + central bank swap lines
Sri Lanka 2022	-7.8% (2022)	Reserve discipline; avoid denial

Cambodia's 2020 recession (-3.1%) was mild partly because its dollarized, less-integrated banking system provided an **accidental buffer**.

Section 3

Tools for Financial Stability: Macroprudential Policy

3

Macroprudential Policy: What It Is and Why It Matters

Core Definition

Macroprudential policy uses **system-wide regulatory tools** to limit the build-up of financial risk across the *entire* financial system — not just individual institutions.

The key distinction:

- **Microprudential:** protect each individual bank from its own failure
- **Macroprudential:** protect the *system* from collective, correlated risks that build up invisibly
- What is safe for one bank can be **dangerous for all banks simultaneously** — the "fallacy of composition"

Two Dimensions of Systemic Risk

Time-series dimension

How risk evolves *over time* through the credit cycle: boom → bust.

Tools: CCyB, dynamic provisioning

Each dimension requires its own tool

Cross-sectional dimension

How risk is *concentrated* across institutions and sectors at one point in time.

Tools: SIFI surcharge, sectoral risk weights

The Macroprudential Toolkit: Six Core Instruments

1. Countercyclical Capital Buffer (CCyB)

Extra capital (0–2.5% RWA) in booms; released in downturns to sustain credit.

Target: procyclicality

2. Loan-to-Value (LTV) Cap

Limits mortgage/property ratio. LTV $\leq$80% means borrower needs 20% equity deposit.

Target: housing bubble

3. Debt-Service-to-Income (DSTI) Limit

Repayments capped at share of income. DSTI $\leq$40%: debt service $\leq$40% of income.

Target: household debt

4. Reserve Requirements

Banks hold a share of deposits at the central bank. Differentiated by currency.

Target: liquidity risk

5. Dynamic Provisioning

Loan-loss buffers built in booms beyond current NPLs. Limits pro-cyclical provisioning.

Target: forward losses

6. Sectoral Weights / SIFI Surcharge

Higher capital for risky sectors (real estate). Extra buffer for systemically important financial institutions (SIFIs).

Target: concentration

Lim et al. (2011) IMF WP/11/238 — Cerutti, Claessens & Laeven (2017, *JFS*) — BCBS (2017) Basel III Framework

How Each Tool Works — and Cambodia's Current Status

Tool	Mechanism	Risk Prevented	Cambodia Status (2024–25)
CCyB	Capital rises with credit growth; released in busts to sustain lending	Boom-bust amplification; credit crunch in recessions	CCyB = 0% (floor) NBC to phase back in as NPLs stabilise
LTV Cap	Borrower must fund a minimum equity share with own funds	Property bubbles; negative equity; bank collateral losses	No formal LTV cap yet NBC monitoring; property = 34% of bank credit
DSTI Limit	Monthly repayments capped at a verified share of income	Household over-indebtedness; MFI default cascades	Critical gap MFI avg. loan = 3× per-capita income; IMF urges adoption
Reserve Reqt.	Banks hold a mandatory share of deposits at the central bank	Excess credit creation; liquidity shortfalls under stress	KHR 7%, USD 7% Pre-pandemic ceiling was 12.5%; NBC plans gradual restoration
Dynamic Prov.	Forward-looking loss buffers built in booms; absorbed in busts	NPL surge depleting capital; procyclical provisioning	Partial 1% general provision on standard loans (Prakas B7-017-344)
Sectoral Weights	Higher risk weights (more capital) for risky sector exposures	Real estate concentration risk; SIFI too-big-to-fail	Active NBC applying higher weights to property; CAR = 22.3%

NBC Financial Stability Review 2024 — IMF Cambodia Article IV, November 2025 — Cerutti et al. (2017, *JFS*)

Basel I → II → III: Evolving Capital Standards

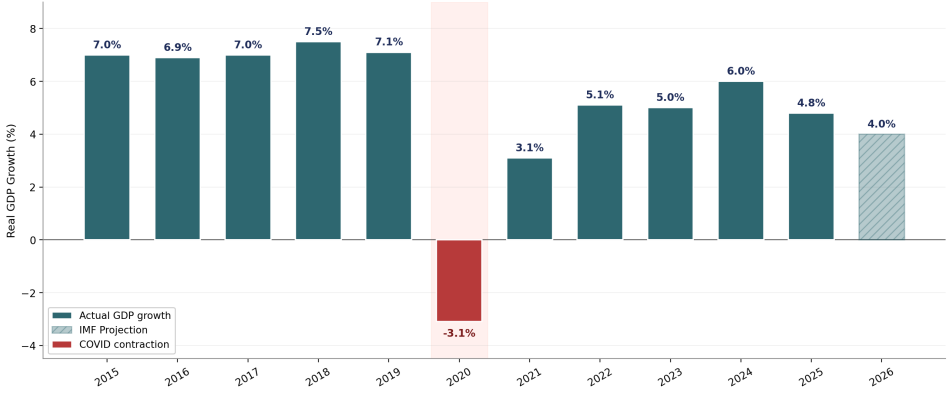
BCBS (1988, 2004, 2017)

Section 4

Cambodia: Macro Overview & Banking Sector

Cambodia GDP Growth — Recovery but Slowing

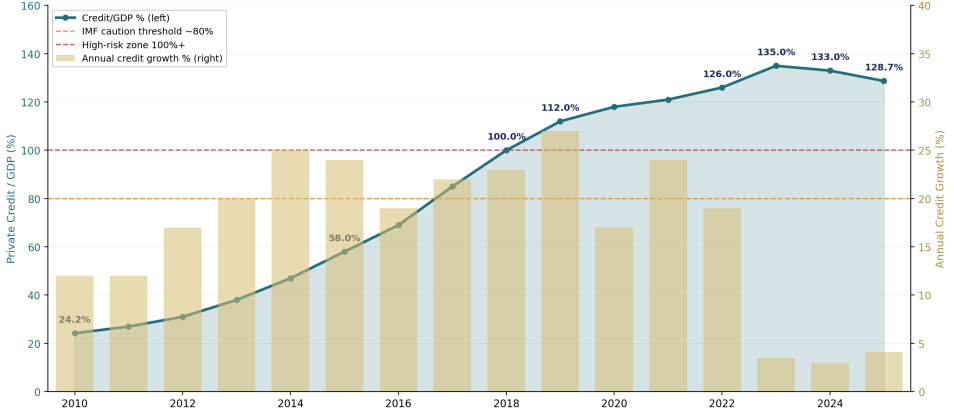
Figure 1 — Cambodia Real GDP Growth (2015–2026)
Actual vs IMF Projections



Sources: IMF 2025 Article IV Consultation (Nov 2025); NBC FSR 2025; ADB Asian Development Outlook (Sep 2025); World Bank Cambodia Economic Update (Dec 2025)

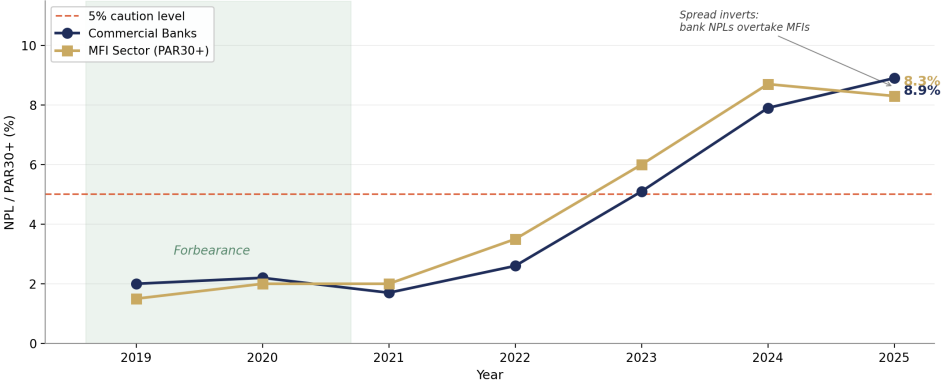
Credit Boom: The Central Vulnerability

Figure 2 — Cambodia: Private Credit-to-GDP Ratio & Annual Credit Growth (2010–2025)



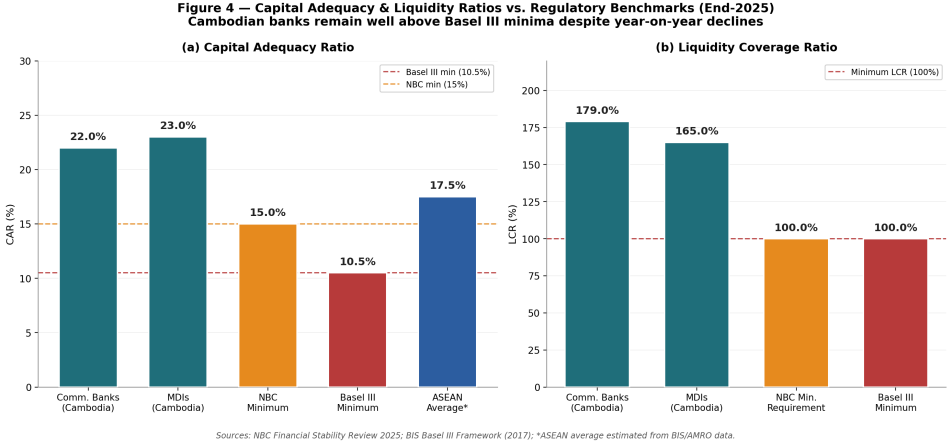
Sources: NBC Annual Reports 2010–2025; NBC FSR 2025; IMF Article IV 2025; World Bank Financial Development DB

NPLs: A Near-Fourfold Surge in 24 Months



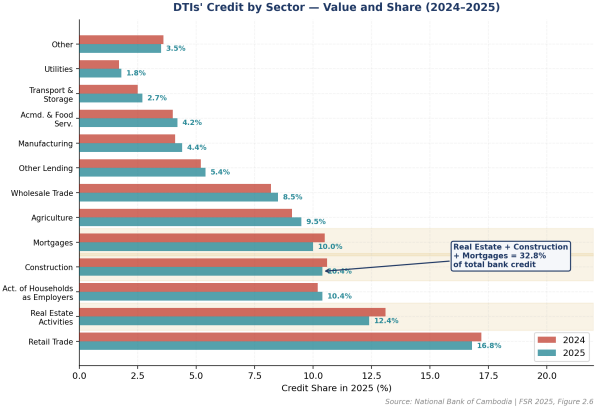
Banks: 1.7% (2021) → 8.9% (2025) — MFIs: 2.0% → 8.3% — NBC Annual Report 2025; NBC FSR 2024; CMA 2024

Capital & Liquidity: Genuine Buffers



Both metrics $\approx 2\times$ the regulatory minimum — Cambodia's primary resilience buffer. Source: NBC FSR 2025

Real Estate Loan Concentration: A Systemic Risk



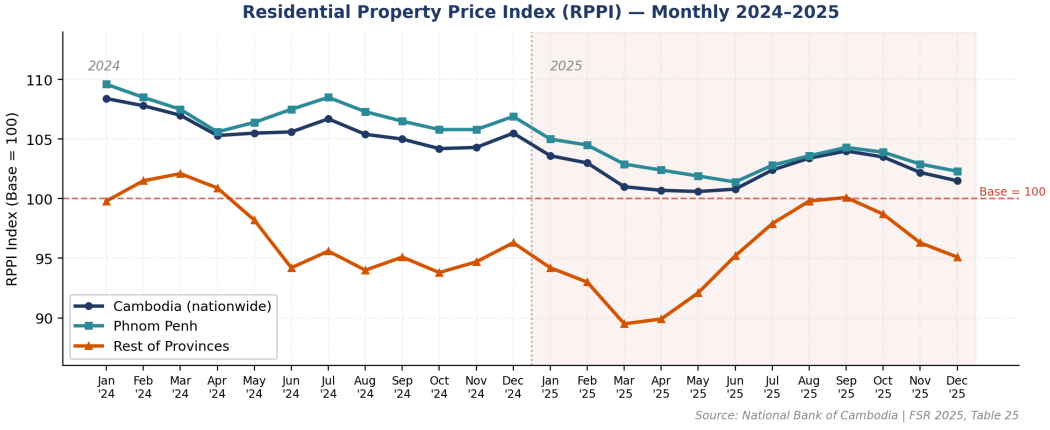
Combined RE Exposure

Real Estate + Construction + Mortgages = 32.8%
of all DTI credit (2025)

- **Real Estate Activities:** 12.4% share (down from 13.1% in 2024)
- **Construction:** 10.4% — heavily exposed to property cycle
- **Mortgages:** 10.0% — outstanding US$6.17bn, down 8.5% YoY
- Real estate = **3rd largest NPL source** at 9.7% of sectoral NPLs (Fig 2.9, FSR 2025)
- **82%** of MFI loans collateralised by land — RPPI decline raises MFI risk

NBC FSR 2025, Figures 2.6 & 2.9;
AMRO Annual Consultation 2025

Property Price Index keeps Declining

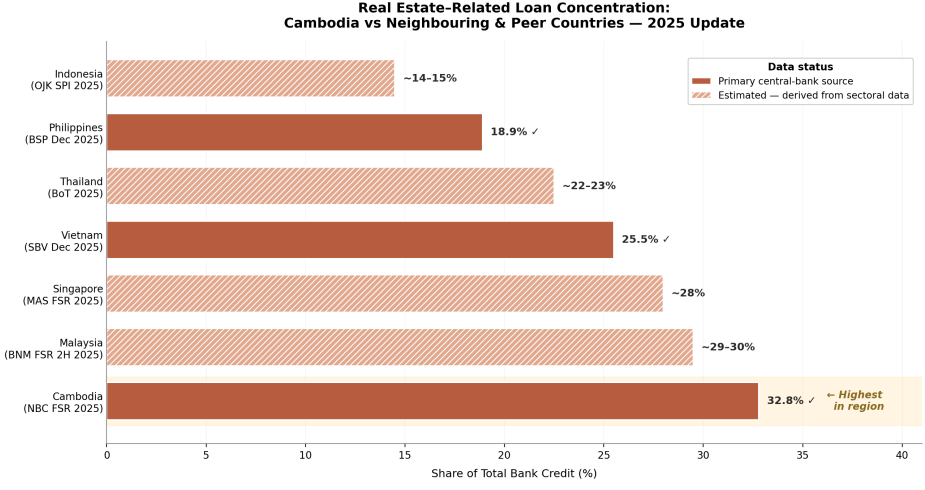


Source: National Bank of Cambodia | FSR 2025, Table 25

- Nationwide RPPI: −**3.4%** avg. 2025; Phnom Penh −**3.6%**; Provinces −**1.9%**
- Provinces fell below base-100 by **Mar 2025** and remained depressed all year
- Collateral deflation ⇒ NPL feedback loop

NBC FSR 2025 Table 25 (RPPI); Figure 2.9 (NPLs)

Real Estate Loans: Cambodia vs Regional Peers



Sources: NBC FSR 2025 (Cambodia); SBV official release Dec 2025 (Vietnam); BSP official data Dec 2025 (Philippines); BNM FSR 2H 2025 (Malaysia); MAS FSR 2025 (Singapore); BoT real-estate loan report FI_CB_094 (Thailand); OJK Indonesia Banking Statistics SPI (Indonesia) Definitions vary across countries.

Comparison among ASEAN countries

Country / Bank	Property-related loans / Total (%)	Property sector NPL (%)	Total NPL (%)	Household debt/GDP (%)	CAR (%)
Vietnam	∼21	3.4–3.7	4.8	∼50	∼12
Philippines	∼20	3.68	3.7	∼25	∼15
Thailand	∼30–35 est.	Elevated	2.94	89.6	∼18–19
Malaysia	∼30–35 hh*	Low	∼1.5*	∼84	18.3
Indonesia	∼13–15 est.	Low	2.20	∼17	26.85
Cambodia	∼33	7.9 (system)	7.9	N/A (low h/h debt)	22.3

*Source: AMRO AFSR 2024 (Figure 2.16–2.17); individual central bank FSRs as cited above; NBC FSR 2025. * Estimated. Highlighted cells = elevated risk indicators. PDI = Personal Disposable Income. H/h = Household.*

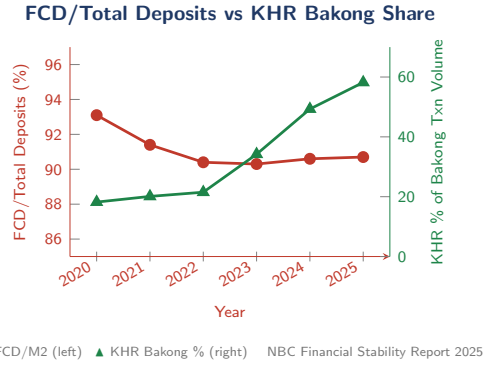
Dollarization: The Structural Constraint

The problem

- **85.1%** of deposits in foreign currency
- No effective interest-rate policy tool
- Lender-of-last-resort capacity in USD is limited
- Fed rate hikes transmit directly to Cambodian borrowers
- **Weak price stability limits the government's fiscal policy flexibility** * This is the emerging problem in the current oil shock

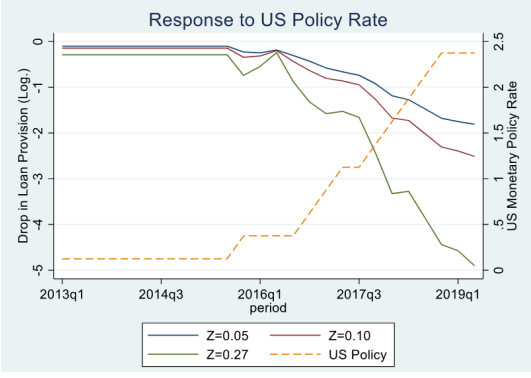
The breakthrough: Bakong System

- **608M transactions** — US$104.81bn (≈330% GDP)
- KHR share of Bakong: **49%** (up from 16.7% in 2020)
- Live cross-border QR: Thailand, Vietnam, Laos, Korea, Alipay



High exposure to global financial shocks

- Cambodian banks are highly dependent on foreign funding sources. Apart from dollarization, it creates risks of spillover of global financial shocks into Cambodian economy.
- Aiba (2023) investigated lending data of Cambodian banks and estimated the spillover effect of US monetary policy
- The research found that Cambodian banks with high exposure to foreign funding source reduced domestic lending significantly after US monetary policy rate increased in 2015.

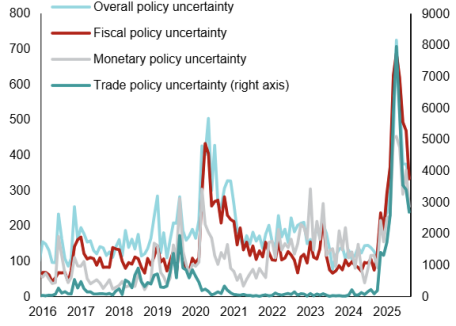


Aiba, Daiju (2023) Bank dependency on foreign funding and global liquidity shocks: The importance of US monetary policy for a developing country. *Journal of Asian Economics*

US policy uncertainty is getting the major concern of global financia condition

Figure 1.3. US Policy Uncertainty Index
(Index)

US policy uncertainty increased across the board.



Source: Bloomberg Finance L.P.; AMRO staff calculations.
Note: Data as of 31 August 2025.

AMRO FSR (2026)

Near-Term Risk 1: US Tariff Shock on Cambodia

Timeline of Events

- **Apr 2, 2025** "Liberation Day": **49% tariff** announced — highest in Southeast Asia
- **Aug 1, 2025**: Reduced to **36%** via formal letter from President Trump to PM Hun Manet
- **Transshipment tariff**: separate **40%** levy on goods routed through Cambodia to evade China tariffs
- **Oct 2025**: US–Cambodia trade agreement signed — Cambodia eliminates **100%** of tariffs on US goods; US imposes final rate of **19%**
- Vietnam comparison: Vietnam agreed **20%**; Cambodia comparable but with greater structural dependency

Exposure & Impact

- US = **37.8%** of Cambodia's total exports ($9.9bn, 2024)
- Garments, footwear & travel goods = **45%** of export revenue; ∼**1 million workers**, 75% women
- Estimated loss at 49%: **US$4.56bn** over 4 years (Datawheel estimate)
- IMF revised 2025 growth down to **4.8%** (from 5.3%)
- Orders paused industry-wide during uncertainty period

Key Lesson

Even the final 19% rate is a structural increase for a country where garments formed the backbone of industrial employment. Export diversification is no longer optional.

Sources: USTR Fact Sheet Oct 2025; DFDL Legal Update Aug 2025; CNBC Apr 2025; IMF Cambodia Art. IV Nov 2025

Near-Term Risk 2: Cambodia–Thailand Border Conflict

Conflict Timeline (2025)

- Root cause: disputed **800km border**, centred on Preah Vihear and four additional temple sites
- **May 2025**: Fatal soldier clash; Cambodia appeals to ICJ; military buildup on both sides
- **Jul 24, 2025**: Major offensive — rocket attack kills 8 Thai civilians in Si Saket; Thailand deploys F-16s. At least **34 fatalities**; **200,000+ displaced**
- **Jul 28, 2025**: Ceasefire brokered via ASEAN / Malaysia
- **Dec 2025**: Conflict reignites; ceasefire **Dec 27**
- Land borders **closed since June 2025**; multiple government travel warnings issued (US, UK, France, Australia)

Economic Impact on Cambodia

- Thai tourist arrivals: **>50% drop** (NBC / Tourism Ministry 2025)
- Asia-Pacific tourism: **−20%** year-on-year
- International arrivals **near zero** Jun–Sep 2025 (border conflict peak months)
- Remittances from Cambodian migrant workers in Thailand **sharply reduced**
- Border trade halted; cross-border gambling revenues lost

Near-Term Risk 3: Middle East War & Global Oil Shock

The Global Shock (2026)

- **Feb 28, 2026**: US–Israel joint airstrikes on Iran; Strait of Hormuz effectively closed to shipping
- Strait normally carries ∼**20 mb/d** of crude (≈20% of global oil supply) and **20% of global LNG**
- Gulf producers (Iraq, Saudi Arabia, UAE, Kuwait, Qatar) shut in ≥**8–10 mb/d** of production
- Brent crude: **$70/bbl** → peak **$120/bbl** (+71%; largest monthly gain on record)
- EIA forecasts Brent **$115/bbl** in Q2 2026, declining only gradually to **$88/bbl** by Q4 2026
- **80%** of Strait oil flows destined for Asia

Cambodia: 100% Oil Importer

- Cambodia imports **all** its oil consumption — among the most exposed small economies in Asia
- Higher fuel costs raise **transport and production costs** throughout the economy
- **Garments sector** especially vulnerable: energy cost is a key input for manufacturing
- Oil price pass-through to inflation is **faster and larger** in Cambodia than regional peers (AMRO / World Bank analysis)
- Royal Government introduced **energy-saving measures** (Mar 2026) and tasked MEF with fuel budget review
- Fertiliser prices up ∼**30%** — risk to agricultural sector and rural households

IEA Oil Market Report Mar 2026; EIA STEO Apr 2026; WEF Mar 2026; AKP / NBC press releases Mar 2026

Key Risks at a Glance

Risk	Level	Key Data Point
Dollarization	Structural	85.1% of deposits in FX; no policy rate
Real estate exposure	High	$\sim$34% of total bank credit
Credit boom legacy	High	Credit/GDP = 135%; boom in 13 years
MFI over-indebtedness	High	Avg. loan US$5,800 vs income US$1,900
China dependence	Elevated	49.8% of FDI inflows (2024)
Climate / flood	Structural	Ranked 4th globally; 80% live in floodplain
US tariff shock	Near-term	40% tariff; garments = 37% of US exports

Resilience buffers: CAR 22.3% — LCR 199% — Reserves US$22.5bn — Public debt only 25.4% GDP

Conclusion: Strengths vs. Vulnerabilities

Strengths

- CAR 22.3% — double Basel III minimum
- LCR 199% — strong liquidity buffer
- FX reserves US$22.5bn (8.5 months imports)
- Bakong: Increased KHR transactions, promote DX in the economy
- Low public debt: 25.4% of GDP

Vulnerabilities

- NPLs: 1.7% $\rightarrow$ 7.9% in just 24 months
- Credit/GDP at 135% — boom-level risk
- Dollarization constrains monetary policy
- MFI avg. loan $= 3\times$ annual income
- Real estate sector in correction

Proactive supervision in 2026 is what separates countries that manage credit cycles from those that become crisis cases.

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