Geoeconomics x RI

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The global order has crossed a structural threshold. The logic that organized the world economy after 1945 — the formation of networks under norms of openness — has run its course, displaced by the logic of network deployment as an instrument of coercion. The United Arab Emirates' exit from OPEC on 1 May 2026 is the terminal signal of that transition.

For Indonesia, the transition arrives at the worst possible moment: strong in only one of eight strategic global networks, while the institutional resilience built after 1998 erodes from within. This essay offers one framework of interpretation — and one verdict: the stability of stability itself is declining.

The Terminal Signal From Abu Dhabi

On 1 May 2026, after nearly sixty years of membership, the United Arab Emirates left OPEC. A production capacity of 4.8 million barrels per day — among the largest within the cartel — was withdrawn from collective coordination and redirected into bilateral *hub–counterparty* configurations. To readers accustomed to treating energy news as market news, Abu Dhabi's decision looked like ordinary commercial calculation. It was not. It was the terminal data point confirming that one era of global economic architecture has ended, and that another has assumed its operating logic.

The argument of this essay is simple to state and heavy in its consequences. From 1945 until roughly 2014, the world economy operated on the **logic of network formation**: the hubs of trade, finance, technology, and energy were constructed under norms of openness and reciprocity, with the costs of participation absorbed by all. Since 2014 — and definitively since 2018 — that logic has been replaced by the **logic of network deployment**: the same hubs are now governed under jurisdictional reassertion, in which the cost of participation includes political-strategic exposure to the decisions of hub controllers. Networks once built to accelerate flows are now weaponized to control them.

The UAE's decision demonstrates three things at once. First, the architecture of the energy network has shifted: producer-side cartel coordination no longer captures rents, because the *chokepoint* has migrated from supply in general to specific transit and financial nodes. Second, bilateral hub–counterparty configurations now dominate; multilateral instruments calibrated to the open-network era — the WTO, OPEC, the OECD — are losing effective amplitude. Third, network repositioning by a middle power is feasible: a state with deep security ties to the United States can publicly opt out of a regional collective once that collective no longer serves its national interest. All three lessons — above all the third — are being read very carefully in Jakarta.

> *Trade access is now bilateral, not rules-based. Sanctions risk is now high, not episodic. And foreign reserves require active geopolitical hedging — not mere portfolio management.*

The findings elaborated throughout this essay can be compressed into a single opening exhibit: three findings, one verdict, one strategic demand.

EXHIBIT 1 EXECUTIVE SUMMARY

Three findings. One verdict. One strategic demand.

FINDING 01	FINDING 02	FINDING 03
The global order has crossed a structural threshold The logic of network formation (1945–2014): finished. Now: the logic of network deployment. UAE exits OPEC, 1 May 2026 — the terminal signal. Bilateral hub–counterparty configurations dominate.	**Weak in six of eight strategic networks** Strong: critical minerals — the nickel chokepoint. Weak: dollar-clearing, semiconductors, AI-compute, telecoms, hydrocarbons. This asymmetry conditions every option.	**Post-1998 resilience is eroding — at the worst moment** Reserves: stable. Growth: stable. Institutions: decaying. Danantara, Law 3/2025, Constitutional Court manipulation, KPK reform — vulnerabilities are compounding.

Verdict: stability is declining; shocks no longer arrive one at a time, but simultaneously, from the heart of the system, through weaponized networks. **Strategic homework:** institutional capacity — deepen the chokepoint, build active-formation networks, while the window is open. Worst case: progressive erosion — then a shock arriving when absorption capacity has been hollowed out.

How to Assess Geo-Economic Momentum

Before the verdict, the method. A geo-economic assessment is not a macroeconomic study with a foreign-policy preface. It is an analysis of how economic interdependence becomes a vector of power — and therefore what it measures is not absolute levels but **asymmetry, concentration, and substitutability**. Reserves of any size mean little if their clearing runs through a single jurisdiction that can close the door. A trade surplus of any size is fragile if its critical inputs are concentrated in one supplier without substitutes. The methodological discipline can be stated as a single test question for every indicator: *if a counterpart weaponized this flow, what would be lost, and how fast?*

Such an assessment rests on four complementary theoretical anchors. Albert Hirschman (1945) supplies the baseline logic: power flows to the party whose adjustment cost is lower when the relationship is disrupted. Susan Strange (1988) supplies the sectoral coverage architecture through four pillars of structural power — security, production, finance, knowledge. Blackwill and Harris (2016) supply the operational taxonomy of the seven geo-economic instruments states actually use. And Farrell and Newman (2019) supply the structural mechanism explaining why those instruments work for some states and fail for others: network topology.

EXHIBIT 2 FOUR THEORETICAL ANCHORS

Hirschman supplies the baseline logic; Strange the long-cycle pillar architecture; Blackwill–Harris the instrument taxonomy; Farrell–Newman the post-2014 network mechanism.

BASELINE LOGIC **Hirschman (1945) — Asymmetric Dependence** Power flows from the partner whose adjustment cost on disruption is lower. The foundational logic for trade-and-finance asymmetry assessment.	PRIMARY · LONG CYCLE **Strange (1988) — Structural Power** Four pillars: security, production, finance, knowledge. The sectoral coverage architecture for long-cycle assessment.
PRIMARY · OPERATIONAL **Blackwill–Harris (2016) — Seven Instruments** Trade, investment, sanctions, cyber, aid, monetary, energy. The operational toolkit for policy-facing work.	PRIMARY · POST-2014 **Farrell–Newman (2019) — Weaponized Interdependence** Network topology; panopticon and chokepoint effects. The structural mechanism behind instrument effectiveness.

From these four anchors follows a ten-step procedure: fix the theoretical anchor; define the unit and scope; translate theory into three to six measurable pillars; select indicators that capture asymmetry, concentration, and substitutability; assemble the data sources (UN Comtrade, IMF, BIS, OECD TiVA, primary sources); normalize, weight, and aggregate; run sensitivity tests; layer scenarios and counterfactuals to separate structural drivers from events; place the results on a leverage–vulnerability matrix; and document the methodology as a separately auditable deliverable. The five operational pillars — security, production, finance, knowledge, and energy and resources — each carry their own key indicators, from military-expenditure concentration and critical-input HHI to the dollar's share of global reserves, frontier-AI compute capacity, and the contestation of energy chokepoints.

EXHIBIT 3 THE FIVE-PILLAR ARCHITECTURE

Indicators capture asymmetry, concentration, and substitutability — not absolute levels.

01 · SECURITY Alliance share of global GDP; military-expenditure concentration; nuclear-warhead distribution; UNSC mandate share.	02 · PRODUCTION World trade as % of GDP; supply-chain length (TiVA); critical-input HHI; manufacturing value added in the top three economies.	03 · FINANCE USD share of reserves; cross-border invoicing; SWIFT routing share; G7 voting weight at the IMF.
04 · KNOWLEDGE Top-100 universities by region; R&D spending share; frontier-AI compute capacity; strategic patent share.	05 · ENERGY & RESOURCES OPEC share of global production; OPEC+ coordination effectiveness; chokepoint contestation; spare-capacity HHI.	THE TEST QUESTION *"If a counterpart weaponized this flow, what would the unit lose — and how fast?"*

The Weaponization Framework

Blackwill–Harris and Farrell–Newman are complementary: the former tells us *what states do*; the latter explains *why some states can do it and others cannot*. Combined, they form an instrument × network-position matrix — the most operationally useful geo-economic framework currently available.

The Blackwill–Harris taxonomy covers seven instruments, all operational and drawn from actual case studies: trade policy (tariffs, export controls, market access); investment policy (FDI screening, outbound restrictions, supply-chain mandates); sanctions (OFAC, SWIFT exclusion, secondary sanctions); cyber (offensive operations, espionage, infrastructure exclusion); economic aid (concessional finance and its conditionality); monetary policy (reserve-currency status, *swap lines*); and energy and commodities (supply manipulation, chokepoint control, cartel coordination). China's rare-earth embargo against Japan, the US–Iran sanctions architecture, and Russian gas to Europe are its empirical precedents.

Farrell–Newman then explains why the same instrument produces radically different effects in different hands. Globalization does not produce flat networks; it produces *hub-and-spoke* topologies with heavy-tailed centrality, in which a small number of hubs aggregate disproportionate flow. Hub centrality is *path-dependent* — conditional on prior choices, but self-reinforcing once established. And states that politically control hub jurisdictions can convert that centrality into coercive instruments through two effects: the **panopticon effect** — continuous and low-amplitude, in which the hub controller observes flows across the network and shapes behavior through anticipated exposure; and the **chokepoint effect** — episodic and high-amplitude, in which the hub controller excludes specific actors from network access at sufficient cost to compel behavioral change.

EXHIBIT 4 THE INSTRUMENT × NETWORK-POSITION MATRIX

Instrument effectiveness is determined by network position — the matrix is not flat.

BLACKWILL–HARRIS · WHAT STATES DO	FARRELL–NEWMAN · WHY INSTRUMENTS WORK
Seven Instruments 01 Trade policy · 02 Investment policy · 03 Sanctions · 04 Cyber · 05 Economic aid · 06 Monetary policy · 07 Energy & commodities	**Five Network Positions** Chokepoint controller · Chokepoint dependent · Panopticon participant · Panopticon target · Alternative-hub builder
THE PANOPTICON EFFECT	**THE CHOKEPOINT EFFECT**
Information Asymmetry Continuous, low-amplitude. The hub controller observes flows across the network — SWIFT message metadata, USD-clearing transaction monitoring, internet traffic analysis.	**Exclusion Capacity** Episodic, high-amplitude. OFAC SDN listing, SWIFT exclusion, semiconductor export controls, the Foreign Direct Product Rule, the Entity List.

Sanctions without dollar-clearing centrality are weak; sanctions with it are devastating. Trade restrictions on substitutable goods are leakable; trade restrictions on chokepoint inputs are decisive.

Eight Momenta And The Mode Transition

With this framework in hand, the period 1945–2026 can be reread not as a sequence of eras displacing one another, but as **eight overlapping momenta** — each a vector with direction, mass, and persistence. The strategic environment at any moment is their vector sum. The hegemonic momentum (M1) is bimodal; liberalization (M2) is now reversing; sovereignty (M3) — including the bebas-aktif tradition — is persistent; the nuclear-strategic momentum (M4) is stable; the petroleum-monetary momentum (M5) is dissolving; the digital-technological/AI momentum (M6) is accelerating; multipolarity (M7) is accelerating; and *weaponized interdependence* (M8) is now dominant.

The 2026 configuration contains a warning rarely spelled out explicitly: three of the four momenta most decisive today — M2 reversing, M5 dissolving, M8 dominant — are **destructive of Indonesia's post-1998 stability architecture** as that architecture was originally calibrated. Indonesia's institutional firewall was designed for an open-network world; that world is being dismantled.

EXHIBIT 5 THE EIGHT GLOBAL MOMENTA · MID-2026

Each vector has direction, mass, and a current trajectory. The strategic environment is their vector sum.

M1 · TRANSITION / BIMODAL **Hegemonic** Consolidation of unipolar structural power — now contested.	M2 · REVERSING **Liberalization** Tariff reduction, capital opening, supply-chain extension — reversing.	M3 · PERSISTENT **Sovereignty** Decolonization, NIEO claims, the bebas-aktif tradition.	M4 · STABLE **Nuclear-Strategic** WMD proliferation tempered by deterrence regimes.
M5 · DISSOLVING **Petroleum-Monetary** The petrodollar architecture; cartel coordination — dissolving.	M6 · ACCELERATING **Digital-Technological / AI** The collapse of distance for information and compute.	M7 · ACCELERATING **Multipolarity** Alternative-hub construction by middle powers.	M8 · DOMINANT **Weaponized Interdependence** Networks converted into instruments of coercion.

Three of the four dominant momenta in 2026 (M2 reversing, M5 dissolving, M8 dominant) are destructive of the post-1998 Indonesian stability architecture as originally calibrated.

Projected onto time, four structural phases organize the 1945–2026 trajectory: the Bretton Woods phase (1945–1971), the network-foundation phase; the Petrodollar phase (1971–1991), linking the energy hub to the financial hub and anchoring dollar

centrality; the Unipolar Liberalization phase (1991–2008), the network-thickening phase — the WTO, capital mobility, China's integration; and the Contested Fragmentation phase (2008–2026), the deployment phase, in which the hubs are weaponized and M8 becomes the dominant operating logic. The two modes must be seen side by side, because the diagnostic difficulty lies precisely here: multilateral institutions appear simultaneously *durable* — the networks remain — and *hollow* — their governance has been overlaid by the logic of jurisdictional coercion.

EXHIBIT 6 THE MODE TRANSITION: FORMATION TO DEPLOYMENT

Same hubs, different operating logic.

1945 – 2014	2014 – PRESENT
Network Formation Mode	**Network Deployment Mode**
Dominant momenta: M1 Hegemonic · M2 Liberalization · M5 Petroleum-Monetary	**Dominant momenta:** M7 Multipolarity · M8 Weaponized Interdependence
Hubs governed under norms of openness and reciprocity. Flow density grows; transaction costs fall; participation costs are absorbed by all.	Hubs governed under jurisdictional reassertion. Flow density continues, but participation cost includes political-strategic exposure to hub-controller decisions.
Character: Constructive · Multilateral · Rules-based	**Character:** Coercive · Bilateral-jurisdictional · Instrumental

Four structural phases: Bretton Woods (1945–1971) → Petrodollar (1971–1991) → Unipolar Liberalization (1991–2008) → Contested Fragmentation (2008–2026). Multilateral institutions (WTO, IMF, World Bank) appear simultaneously durable — the networks remain — and hollow — their governance overlaid by jurisdictional-coercion logic.

System Structure: Polarity, War, And Shocks

Why is this mode transition so dangerous for a state like Indonesia? The answer is structural, and here Kenneth Waltz remains the correct point of departure: what matters is not the intentions of actors but the structure of the system. Change the polarity, and the dominant form of conflict changes — and so does the kind of shock that arrives in Jakarta.

The bipolar era (1947–1991) produced proxy wars — Korea, Vietnam, Afghanistan, Iran–Iraq: cold at the center, hot at the periphery — with shocks flowing to Indonesia through the channels of commodities and alliance alignment. The unipolar era (1991–2001) produced hegemonic wars — the Gulf in 1991, Bosnia, Kosovo — under a single pole and the Washington Consensus, with financial shocks in the form of hot capital. The global-terrorism era (2001–2018) produced asymmetric wars that exhausted the hegemon while China rose quietly; its shock, the 2008 crisis, arrived for the first time *from the heart of the system*. And the multipolar era (2018–present) combines conventional war — Ukraine, Gaza, Iran — with two new wars: the trade war and the technology war. The arithmetic of frequency is brutal: **bipolarity produced roughly one shock per decade; multipolarity produces**

four shocks per year — and now simultaneously, through four channels at once.

EXHIBIT 7 POLARITY × WAR × ECONOMY

Waltz: not intentions — structure. Change the polarity, and the form of conflict changes, and so does the shock that arrives in Jakarta.

1947–1991 · BIPOLAR **Proxy Wars** Korea · Vietnam · Afghanistan · Iran–Iraq. Cold at the center, hot at the periphery. **Shocks:** commodities & alignment.	**1991–2001 · UNIPOLAR** **Hegemonic Wars** Gulf 1991 · Bosnia · Kosovo. One pole; the Washington Consensus. **Shocks:** financial — hot capital.
2001–2018 · GLOBAL TERRORISM **Asymmetric Wars** Afghanistan · Iraq 2003 · ISIS. The hegemon exhausted; China rising quietly. **Shocks:** 2008 — from the heart of the system.	**2018–PRESENT · MULTIPOLAR** **Conventional + Two New Wars** Ukraine · Gaza · Iran. Plus: the trade war, the technology war. **Shocks:** simultaneous — four channels at once.

Bipolar: one shock per decade. Multipolar: four shocks per year.

Six Decades, Five Episodes

Indonesia's political-economic history can be read as one pattern repeating with painful precision: **decided there, borne here**. Every major episode of domestic volatility begins with a hegemonic decision, travels as a geo-economic shock, and lands as a national crisis whose shape is determined by the institutions that receive it.

In 1967, with inflation at 650 percent, foreign capital became the ticket of alliance: the Foreign Investment Law and the Freeport contract aligned Indonesia with the West — geopolitics wrote the economic constitution. In 1973–74, the OPEC embargo quadrupled the oil price; petrodollars flooded in, the Malari riots erupted, and the rentier economy was born. In 1985, the Plaza Accord strengthened the yen overnight; the debt burden ballooned, Jakarta was not invited to the table, and the domestic answer — the Pakto 88 banking deregulation without supervision — planted a time bomb. In 1996–98 the bomb detonated: the rupiah collapsed from Rp2,450 to roughly Rp17,000, GDP contracted by 13.1 percent, and the regime fell — a regional shock meeting extractive institutions produced national collapse. And in 2026, for the first time, four wars arrive at a single point in time, with a fifth channel that has never existed before: technology denial.

> *Even positive shocks are dangerous — when received by extractive institutions. The petrodollars of 1974 and the capital floods of the 1990s both proved it.*

EXHIBIT 8 FIVE EPISODES OF VOLATILITY

Each episode: hegemonic decision → shock → Indonesian volatility.

1967 **Capital as the Ticket of Alliance** Inflation at 650%. The Foreign Investment Law. Freeport. Alignment with the West. Geopolitics wrote the economic constitution.	**1973–74** **Petrodollars & Malari** The OPEC embargo. Oil ×4. Petrodollars flood in. Malari erupts. The rentier economy is born.	**1985** **The Plaza Accord** The yen strengthens overnight. Debt balloons. Jakarta not invited. The answer: Pakto 88 — without supervision.
1996–98 **Collapse** Rp2,450 → roughly Rp17,000. GDP −13.1%. The regime falls. Regional shock + extractive institutions = national collapse.	**2026** **Four Wars, One Point in Time** Trade · Technology · Hormuz · Supply chains. Simultaneous. The fifth channel: technology denial.	**THE PATTERN** **Decided There, Borne Here** Even positive shocks are dangerous — when received by extractive institutions.

The 2026 Convergence: FOur Wars, One Currency

What distinguishes 2026 from every preceding episode is simultaneity. The 1973 crisis was an energy crisis; 1985 a currency crisis; 1998 a financial crisis. The year 2026 is all four at once — plus one dimension that did not exist in 1998.

The **trade war** turns tariffs into artillery: supply chains are bifurcating, *friend-shoring* has become doctrine, and Edward Luttwak's formula — *the logic of conflict in the grammar of commerce* — has found its historical moment. The **technology war** makes chips the oil of the twenty-first century: export controls, entity lists, and techno-nationalism in Alex Capri's sense construct a transmission channel entirely unknown in 1998. The **Hormuz war** turns geography into a weapon: Iran's retaliation on 12–13 July struck seven target clusters across five Gulf states — Al Udeid in Qatar, the Fifth Fleet and Isa Air Base in Bahrain, Patriot and HIMARS sites in Kuwait, Prince Hassan in Jordan, radar installations and the Duqm port in Oman — and, most consequentially for the economy, two merchant vessels in the strait's shipping lanes. Tehran declared Hormuz closed "until further notice"; CENTCOM denied it while striking hundreds of targets; diplomacy is in suspended animation. And the **supply-chain war** follows mechanically: strait traffic has collapsed to six vessels per twelve hours from a norm of 18–22 per day, war-risk insurance and freight rates have surged, and tankers are rerouting.

All of that pressure is legible in a single currency. On 13 July the rupiah traded at Rp18,109 — close to the record low of 18,188 set on 8 June. The IHSG has lost 35 percent from its peak of 9,174 and is consolidating around 5,930. Brent rose

5.4 percent on the week to US$79 — roughly 13 percent above the state-budget assumption — with a wartime peak of US$93–94. The ten-year government-bond yield holds at 7.23 percent amid continuing foreign outflows. S&P affirmed the BBB stable rating on 13 July, but Moody's and Fitch carry negative outlooks; and in November 2026 the MSCI review becomes the next critical point, with a warning label already in effect.

EXHIBIT 9 THE 2026 CONVERGENCE

Four wars. One point in time. One currency.

THE TRADE WAR Tariffs as artillery. Supply chains bifurcating. Friend-shoring. Luttwak: *the logic of conflict, the grammar of commerce*.	**THE TECHNOLOGY WAR** Chips = the oil of the 21st century. Export controls. The Entity List. Capri: techno-nationalism. A channel that did not exist in 1998.
THE HORMUZ WAR Retaliation, 12–13 July. US bases in five states. Two merchant vessels. Iran: the strait is closed. The ceasefire MOU has collapsed.	**THE SUPPLY-CHAIN WAR** Six vessels per 12 hours — down from 18–22 per day. JMIC: severe. War-risk insurance & freight surging. Tankers rerouting.

ONE CURRENCY · DATA AS OF 13 JULY 2026

Rp18,109	Exchange rate, 13 July — record low **18,188** (8 June)
–35%	IHSG from its peak of **9,174** — consolidating around 5,930
US$79	Brent, 13 July, +5.4% on the week — wartime peak **$93–94**
7.23%	10-year government-bond yield · foreign outflows continuing
BBB stable	S&P affirms the rating (13 July) — **Moody's & Fitch: negative**
Nov 2026	Critical MSCI review — warning label in effect

1973: energy. 1985: currency. 1998: financial. 2026: all four — at once. The third rung of the escalation ladder is no longer a scenario; it has become geography.

The Anatomy Of Transmission

How, precisely, does a shock in the Strait of Hormuz become pressure on the state budget in Jakarta? Through four channels — and not one of them has ever closed. The **energy channel**: the Hormuz premium raises the Indonesian crude price, subsidies balloon, the budget deficit widens; the irony is that the mechanism that worked *for* Indonesia as an exporter in 1973 now works *against* Indonesia as a net importer. The **financial channel** — the fastest: risk-off sentiment triggers bond selling, the rupiah comes under pressure, and Bank Indonesia is trapped in the trilemma; the pressure is compounded by MSCI-related forced selling and export-

proceeds frictions. The **logistics channel** — slow but deep: rerouting tankers raise insurance and freight rates, driving imported inflation; and in a fragmented world, recovery is no longer automatic. And the **technology channel** — entirely new: export controls function as a geopolitical tollgate producing not price volatility but something more permanent — a *capability ceiling* on national capacity.

The causal chain runs from system polarity to hegemonic conflict, from conflict to geo-economic shock, from shock to transmission channel, from channel to domestic volatility — and ends at the one variable that lies entirely in Indonesia's hands: the institutional response. Each decade adds a channel: energy, then currency, then finance, now technology.

EXHIBIT 10 FOUR TRANSMISSION CHANNELS AND THE CAUSAL CHAIN

Not one channel has ever closed. A channel is added each decade: energy → currency → finance → technology.

ENERGY Hormuz premium → crude price rises → subsidies balloon → budget deficit. Brent $79 — 13% above the budget assumption. 1973: worked for us. 2026: net importer — against us.	**FINANCIAL** Risk-off → bonds sold → rupiah pressured → BI's trilemma. The fastest channel. Compounded by MSCI forced selling & export-proceeds frictions.
LOGISTICS Tankers reroute → insurance & freight rise → imported inflation. Slow but deep. Under fragmentation, recovery is not automatic.	**TECHNOLOGY** Export controls → geopolitical tollgate → capability ceiling. A new channel. Not price volatility — a ceiling on capability.

SYSTEM POLARITY
↓
HEGEMONIC CONFLICT
↓
GEO-ECONOMIC SHOCK
↓
TRANSMISSION CHANNEL
↓
DOMESTIC VOLATILITY
↓
INSTITUTIONAL RESPONSE

The Network-Position Portofolio

In a world operating on M8 logic, a state's real wealth is not its GDP but the portfolio of its positions across strategic global networks. Mapping Indonesia across eight networks in mid-2026 yields a sharply asymmetric picture: **strong in one, intermediate in one, weak in six**.

Indonesia's only *chokepoint controller* position is critical minerals — nickel — the product of the downstreaming doctrine and the ore-export ban which, within this framework, stands as Indonesia's most consequential geo-economic decision in a generation. The intermediate position belongs to payments architecture: dependent internationally, but a growing regional *chokepoint controller* through the QRIS–LCS–CBDC complex. Everywhere else, Indonesia is a *chokepoint dependent* and a *panopticon target*: in finance and dollar-clearing, in semiconductors, in AI and compute, in telecoms and digital infrastructure, in the defence industrial base, and in hydrocarbons. This asymmetry is not mere description — it is the geo-economic shape of Indonesia's position, and it conditions every policy option: Indonesia is *coercion-capable* only in critical minerals, and *coercion-target* in the remaining six networks.

EXHIBIT 11 THE EIGHT-NETWORK PORTFOLIO

Indonesia's position across eight strategic global networks — mid-2026.

NETWORK	POSITION	TRAJECTORY	PRIORITY	PRIMARY LEVER
Critical minerals (nickel)	CHOKEPOINT CONTROLLER	↑	Defend + Upgrade	Downstreaming deepening
Regional payments	CD international + CC regional	↑	Defend + Upgrade	QRIS–LCS–CBDC complex
Telecoms / digital infrastructure	CD + PT	↑ achievable	Upgrade + Diversify	Regional cable & cloud hub
Defense industrial base	CD + PT	→	Defend + Diversify	Supplier diversification
Hydrocarbons	CHOKEPOINT DEPENDENT	↓	Defend + Diversify	SPR construction; Hormuz bypass
Semiconductors	CHOKEPOINT DEPENDENT	→ deteriorating	Defend + Diversify	Talent pipeline (20 years)
AI & compute	CHOKEPOINT DEPENDENT	→ deteriorating	Upgrade + Diversify	Sovereign inference + open weights
Finance / dollar-clearing	CHOKEPOINT DEPENDENT	↓	Defend + Diversify	Macro-firewall preservation

CC = chokepoint controller · CD = chokepoint dependent · PT = panopticon target. **Coercion-capable:** critical minerals. **Coercion-target:** finance · chips · AI · telecoms · DIB · hydrocarbons. Asymmetry = the geo-economic shape of Indonesia's position.

The Escalation Ladder And Arithmetic Of Transmission

Network positions are static; what is dynamic is the status of the commodities flowing through them. The framework models that status as a **four-rung escalation ladder**. At rung zero, the commercial, the operative logic is price and efficiency with the WTO and the market as referee — a chip in the year 2000 was treated like a shoe, only more complicated. At rung one, the strategic, the

logic is criticality in Hirschman's sense, with downstreaming and stockpiles as instruments — this is where post-ban nickel lives. At rung two, securitization, the logic is the Copenhagen School's *speech act*: export controls and entity lists, with decisions migrating to national security councils. And at rung three, militarization, the commodity becomes war matériel: blockade, interdiction, convoy. Hormuz in July 2026 — merchant vessels targeted, the strait declared closed — locks in the third rung. Oil is no longer escorted by warships; it is contested with missiles.

EXHIBIT 12 THE COMMODITY ESCALATION LADDER

From market to war: four rungs, one direction. No longer free markets – open economies – global supply chains; now state intervention – decoupling – supply-chain war.

0	**COMMERCIAL** — Logic: price & efficiency. Referee: the WTO · the market. A chip in 2000 = a shoe — only more complicated.
1	**STRATEGIC** — Logic: criticality (Hirschman). Instruments: downstreaming · stockpiles. Post-export-ban nickel lives here.
2	**SECURITIZATION** — Logic: the speech act (Copenhagen). Instruments: export controls · entity lists. Decisions migrate to national security councils.
3	**MILITARIZATION** — Logic: war matériel. Instruments: blockade · interdiction · convoy. Hormuz, July 2026 — merchant vessels targeted; the strait declared closed.

The ladder is then formalized as **MTMK-1** — a Markov transition model of commodity status — so that qualitative intuition can be tested as arithmetic. Commodity status is modeled as an annual *birth–death* chain on the state space $S \in \{0, 1, 2, 3\}$, with upward probability $p\uparrow = \Lambda(\beta_0 + \beta_1 Z)$, where the exposure index Z is a weighted combination of three variables: market concentration (HHI, weight 0.40, following Hirschman), the discursive intensity of securitization (T, weight 0.35, following Copenhagen), and dual-use character (D, weight 0.25). Calibration against four empirical anchors over 2000–2026 yields $\beta_0 = -4.608$ and $\beta_1 = 4.056$. Two structural properties of the model deserve emphasis. First, **hysteresis**: with $\delta = 0.10$, commodities descend the ladder ten times more slowly than they climb — there has been exactly one case of descent in twenty-five years, pharmaceuticals after COVID. Second, **militarization is semi-absorbing**: with $p(3\to2) = 0.15$, the expected duration at the militarization rung is roughly 6.7 years — consistent with the Tanker War, the Black Sea, and Hormuz in 2026.

The 2026–2036 simulation yields four key figures. Graphite takes 7.8 years to reach securitization — replicating gallium's 2020 profile. The chip–EUV–GPU–gallium cluster carries a militarization horizon of 8–11 years. The probability mass at militarized status nearly triples in a decade, from 8 to 22 percent. And nickel takes 26.4 years to reach securitization — safe, but only because its T is low. The policy implication is precise: **T is controlled by foreign policy, not by markets**. Bebas-aktif, in the language of this model, is a strategy of minimizing T across Indonesia's entire commodity portfolio.

EXHIBIT 13 FORMALIZATION · MTMK-1

The arithmetic of transmission: a Markov transition model of commodity status.

$S \in \{0, 1, 2, 3\}$ · ANNUAL BIRTH–DEATH CHAIN

$p\uparrow = \Lambda(\beta_0 + \beta_1 Z)$ $Z = 0.40 \cdot HHI + 0.25 \cdot D + 0.35 \cdot T$

$\beta_0 = -4.608 \cdot \beta_1 = 4.056$ · CALIBRATED ON 4 ANCHORS, 2000–26

STRUCTURAL PROPERTIES

Weights from theory: HHI 0.40 (Hirschman) · T 0.35 (Copenhagen) · D 0.25 (dual-use).

Hysteresis $\delta = 0.10$ — descent is 10× slower than ascent. One case in 25 years: pharmaceuticals post-COVID.

Militarization semi-absorbing: $p(3\to2) = 0.15 \to$ E[duration] ≈ 6.7 years. The Tanker War · the Black Sea · Hormuz 2026.

KEY FIGURES · 2026–2036 SIMULATION

7.8 yrs — graphite to securitization (gallium's 2020 profile).

8–11 yrs — militarization horizon of the chip–EUV–GPU–gallium cluster.

8% → 22% — militarized mass, nearly 3× in one decade.

26.4 yrs — nickel to securitization; safe only because T is low.

T is controlled by foreign policy, not markets. Bebas-aktif = minimizing T across the entire portfolio. A decade to climb, a century to descend — or one war to fall.

The Funnel Warning: Two Cascades

External shocks do not strike stability directly; they propagate through compounding stages of institutional and structural exposure — a **funnel**. Indonesia has passed through one complete funnel, and now stands in the middle of a second. The 1985–1998 cascade taught Indonesia to build a firewall. The 2018–2026 cascade is testing whether that firewall has been defended.

The **first cascade** was triggered by three structurally distinct events within a six-year window: the Plaza Accord (1985), which set off an eleven-year surge of Japanese capital into Southeast Asia and swelled external debt from US$36 billion to US$136 billion; the Soviet collapse (1989–1991), which removed the Cold War rationale for Western tolerance of New Order governance; and the Gulf War (1991), which consolidated the dollar as the post-Cold-War global anchor. Nine compounding stages then converted triggers into fragility: capital floods met banking deregulation without supervision — Pakto 88 raised the number of banks from 111 to 240 without a prudential firewall; cronyism concentrated credit in family conglomerates; the managed exchange rate acted as an implicit subsidy for currency mismatch; until the Thai baht trigger unleashed indiscriminate capital withdrawal, and the IMF program compounded the distress. May 1998 was the result: GDP down 13.1 percent, a banking recapitalization worth 50 percent of GDP, the rupiah at roughly Rp17,000, and the end of a 32-year regime. The institutional reforms that followed — Bank Indonesia independence, the OJK, the fiscal rule, deposit insurance, electoral democracy, civil-military separation — were the explicit answer to this cascade.

The **second cascade** runs on the same compounding logic but a different mechanism. Its triggers are six discrete events — the US–China trade-technology war since 2018, the COVID-19 pandemic, Russia's invasion of Ukraine with the freezing of US$300 billion in reserves as the largest M8 deployment in history, the Liberation Day tariffs repealing WTO MFN, the US–Israel war on Iran as the first AI-integrated war, and the UAE's OPEC exit — plus four continuous momenta: the AI inflection, BRICS expansion, M8 dominance, and the climate transition with its CBAM. Where the first cascade ran on capital-flow redirection under M2-positive conditions, the second runs on network weaponization under M2-negative, M8-dominant conditions: network reconfiguration and *friend-shoring*; the Russia-sanctions demonstration that triggered reserve diversification and record gold accumulation; the energy transition's vindication of the nickel chokepoint alongside new exposure from CBAM and FEOC rules; tariff generalization forcing bilateral negotiation; the Hormuz war compressing the fiscal position — down to the June–July 2026 reading: **stable levels, negative derivatives**. The firewall is eroding; compound vulnerability is rising.

EXHIBIT 14 THE FUNNEL FRAMEWORK: TWO CASCADES

Same logic, different mechanism, different absorption capacity.

CASCADE I · 1985–1998 **Capital Flows → Banking Fragility → Twin Crises**	
01	**Three triggers:** Plaza Accord · Soviet collapse · Gulf War
02	Capital-flow redirection — external debt $36bn → $136bn
03	Banking deregulation without supervision — Pakto 88: 111 → 240 banks
04	Cronyism & credit concentration in family conglomerates
05	Erosion of Cold-War conditionality — legitimacy under pressure
06	The managed peg as an implicit subsidy for currency mismatch
07	Thai baht trigger → contagion; indiscriminate capital withdrawal
08	The IMF program compounded the distress
09	**May 1998:** GDP −13.1% · recap 50% of GDP · Rp ~17,000 · regime change
Lesson: build the institutional firewall — BI independence, OJK, the fiscal rule, deposit insurance.	
CASCADE II · 2018–2026 **Network Weaponization → Autonomy Compression**	
01	**Six triggers + four momenta:** trade-tech war · COVID · Ukraine · Liberation Day · Iran · UAE-OPEC
02	Network reconfiguration & friend-shoring — bifurcated exposure

03	The Russia-sanctions demonstration — reserve diversification; gold accumulation
04	The AI inflection compounds M6 into an active competitive dimension
05	Energy-transition repricing — nickel vindicated; CBAM & FEOC create new exposure
06	Liberation Day tariff generalization — trade access bilaterally negotiated
07	The Iran war & Hormuz closure — fiscal compression; rupiah pressure; the first AI war
08	UAE OPEC exit (1 May 2026) — bilateral configurations confirmed dominant
09	**July 2026:** stable levels · negative derivatives · firewall eroding
Challenge: defend & extend the firewall under M8-dominant conditions.	
Worst case: 24–36 months of stress with resilience eroding — then a shock arriving when absorption capacity has been hollowed out.	

The Determining Variable: Institutions

Why do identical shocks produce different amplitudes? Here Daron Acemoglu enters as the determining variable: **inclusive institutions dampen shocks; extractive institutions amplify them**. Six decades of Indonesian history constitute a natural experiment for that proposition.

The New Order (1966–1998) was an extractive institution: oil rents, connected credit, law subordinate to power — apparently stable until tested, and when the test came in 1998, not one credible anchor remained; a regional shock became national collapse. The Reformasi era (1998–2024) built inclusive institutions: constitutional amendment, an independent central bank, the KPK, an open economy — with measurable results: the 2008 crisis, the 2013 taper tantrum, and the 2020 pandemic were absorbed without systemic crisis. Markets, in Indonesia's experience, proved to be democracy's ally. And the 2024–2026 period is a regression — tested, not yet broken: oversight weakening, discretion centralizing, populist spending compressing fiscal space, markets selling. Yet on 13 July, S&P affirmed BBB stable; the three-percent deficit anchor and Bank Indonesia's independence were still judged credible — while Moody's and Fitch carry negative outlooks. That split rating is the portrait of a *commitment device* under test: defended, it dampens; eroded, it opens the vicious circle of volatility → discretion → weak institutions → greater volatility.

> *In 2026, Indonesia's largest risk premium is domestically sourced. The shock is real; the amplification is self-made.*

EXHIBIT 15 SAME SHOCK, DIFFERENT AMPLITUDE

Acemoglu: inclusive dampens, extractive amplifies. Six decades of Indonesia = a natural experiment.

1966–98 · NEW ORDER	1998–2024 · REFORMASI	2024–26 · THE SHOCK
Extractive Oil rents. Connected credit. Law subordinate to power. Apparently stable — until tested. 1998: not one credible anchor; regional shock → national collapse.	**Inclusive** Constitutional amendment. Independent BI. The KPK. An open economy. Measured results: 2008, 2013, 2020 — no systemic crisis. Markets = democracy's ally.	**Regression — Tested, Not Yet Broken** Oversight weakening. Discretion centralizing. Populist spending compressing fiscal space. Markets selling. Yet 13 July: S&P affirms BBB stable; the 3% deficit anchor & BI independence still credible. Moody's & Fitch: negative.

A split rating: one stable, two negative. The commitment device is under test. Defended → it dampens. Eroded → the vicious circle: volatility → discretion → weak institutions. Synthesis of the domestic vectors: stable on level indicators, unstable on derivative indicators — **the stability of stability is declining.**

Three Trajectories, 2026-2028

Where does the funnel lead? Three trajectories with conditional probabilities organize the 24-month horizon. **Scenario A, Managed Adaptation (35 percent)**: Hormuz reopens within six to nine months, bilateral arrangements remain bounded, and the firewall is defended — Indonesia exits the funnel with its critical-minerals position improved, its payments architecture expanding, and a bebas-aktif autonomy that is compressed but bounded. **Scenario B, Compounded Stress (45 percent)** — the modal scenario: a prolonged Hormuz closure, tariff escalation, and progressive firewall erosion; a sustained sub-crisis stress regime with no catastrophic discontinuity, but with accumulating institutional hollowing. **Scenario C, Cascade to Compound Crisis (20 percent)**: Hormuz closed for more than eighteen months, a second-order shock arrives, the firewall is hollowed — the comparator is 1997.

The framework's central warning is counter-intuitive: **the worst case is not Scenario C striking an intact firewall**. An intact firewall absorbs Scenario C. The worst case is Scenario B persisting for 24–36 months with progressive firewall erosion — followed by a Scenario-C-equivalent shock arriving precisely when the firewall has been substantially hollowed out. And because these probabilities are conditional on the current policy trajectory, active institutional defense materially shifts probability mass: from C and B — toward A.

EXHIBIT 16 SCENARIOS 2026–2028 · 24-MONTH HORIZON

Three trajectories with probabilities conditional on the current policy trajectory.

SCENARIO A · 35%	SCENARIO B · 45%	SCENARIO C · 20%
Managed Adaptation Hormuz reopens in 6–9 months · bilateral arrangements bounded · firewall defended. **GDP** 4.8–5.2% · **IDR/USD** 16,500–17,000 · **IHSG** recovers by Q4 2026. Critical minerals improve; payments expand; the firewall holds. Bebas-aktif compressed — but bounded.	**Compounded Stress** Hormuz prolonged · tariff escalation · progressive firewall erosion. **GDP** 3.8–4.3% · **IDR/USD** 18,000–19,000 · **IHSG** down 15–20%. A sustained sub-crisis stress regime. No catastrophe — but progressive institutional hollowing; compound vulnerability rising.	**Cascade to Compound Crisis** Hormuz 18+ months · a second-order shock · firewall hollowed. **GDP** recession risk · **IDR/USD** 20,000+ · **IHSG** down 30%+. Comparator: 1997. Firewall intact → absorbed; hollowed → compound crisis. Today's choices determine the outcome.

Active institutional defense shifts probability mass: from C and B — toward A. The worst case is not C striking an intact firewall, but B persisting for 24–36 months followed by a C-equivalent shock arriving when the firewall has been hollowed out.

Strategic Imperatives, 2026–2035

From the foregoing analysis flow five institutional investment priorities for 2026–2035 — tiered, but pursued in parallel. **Tier one**, and the highest because it determines portfolio-wide resilience: the macroeconomic-institutional firewall — Bank Indonesia independence, OJK autonomy, fiscal-rule integrity, and reserve adequacy with composition diversification. This is the absorption capacity for every other shock. **Tier two**, the highest single-network leverage: critical-minerals chokepoint deepening — defend nickel downstreaming, expand into precursor and cathode-active-material segments, and replicate the doctrine to bauxite, copper, and tin. **Tier three**, the highest 10–15-year leverage: active-formation network construction — telecoms and digital infrastructure, regional payments through the QRIS–LCS–CBDC complex, and domestic AI-compute capacity; the position window is open now. **Tier four**: defense-industrial-base diversification through the mixed-supplier doctrine — the operational expression of bebas-aktif — with European, Korean, and Turkish procurement at meaningful amplitude and expansion of domestic defense-industrial capacity. **Tier five**: hydrocarbons exposure management — strategic petroleum reserve construction toward 90 days, Hormuz-bypass diversification, refining capacity, and a managed fuel-subsidy architecture under sustained price-shock conditions.

EXHIBIT 17 FIVE PRIORITIES · PARALLEL PURSUIT

The institutional investment ordering, 2026–2035.

TIER 1	**The macroeconomic-institutional firewall.** BI independence · OJK autonomy · the fiscal rule · reserve adequacy. The absorption capacity for every other shock.
TIER 2	**Critical-minerals chokepoint deepening.** Defend nickel downstreaming · expand into precursor & CAM · replicate the doctrine: bauxite, copper, tin.
TIER 3	**Active-formation network construction.** Telecoms/digital infrastructure · regional payments (QRIS–LCS–CBDC) · domestic AI-compute. The window is open now.
TIER 4	**Defense-industrial-base diversification.** The mixed-supplier doctrine · European, Korean, Turkish procurement at meaningful amplitude · domestic DIB capacity.
TIER 5	**Hydrocarbons exposure management.** SPR construction toward 90 days · Hormuz-bypass diversification · refining capacity · a managed fuel-subsidy architecture.

One evaluation question for every institutional decision: does it strengthen — or weaken — Indonesia's capacity to absorb the next funnel cascade?

The Evaluation Question

The framework's most important contribution is not its predictions but its capacity to make portfolio choices *legible*. In a world operating on the logic of network deployment, every Indonesian institutional and policy decision can be evaluated by a single question: **does this decision improve or degrade Indonesia's network-position portfolio across the eight networks where strategic outcomes are determined — and does it strengthen or weaken Indonesia's capacity to absorb the next cascade?**

The closing diagnosis must be stated without euphemism. Indonesia today is stable on level indicators: reserves above US$140 billion, growth in the mid-four to low-five percent range, inflation anchored, a well-capitalized banking system, a constitutional electoral cycle. But Indonesia is unstable on derivative indicators: the rate of change is negative across institutional quality, the civil-military balance, and macroeconomic concentration. The 1985–1998 cascade taught Indonesia to build the firewall. The 2018–2026 cascade is testing whether it has been defended — and that test is being conducted not in Washington, Beijing, or the Strait of Hormuz, but in Jakarta. The shock is real. The amplification, if it occurs, will be self-made. The stability of stability is declining — and the window for reversing that derivative, though narrowing, remains open.