

Global Economic Outlook: Recovery Amid Downside Risks

August 27, 2026

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Summary / Global Economic Outlook

The Global Economy: A Tug-of-War Between the Middle East and AI Investment

- **Global growth is projected at +2.9% in 2026 and +3.4% in 2027, up 0.2 and 0.3 percentage points from the previous outlook (May 2026). Key factors: a lower oil price forecast, a smaller-than-assumed impact of the Middle East situation on China, ASEAN and India, and a sharp rise in AI-related exports from China, ASEAN, Taiwan and Korea.**
- Right after the military clash in the Middle East, oil prices spiked on panic and product shortages were feared. However, inventory releases, detour exports, alternative sourcing and a temporary recovery in Middle East supply helped calm the reaction, and prices ran below the previous forecast. Looking ahead, in spite of an unstable Red Sea detour route and shrinking spare export capacity at alternative suppliers, we have lowered the oil price forecast slightly given inventory use and demand restraint.
- **AI-related investment remains a major driver of global economic growth. It is expected to continue supporting growth in 2026, offsetting the negative impact of geopolitical developments in the Middle East, while at the same time facing downside risks such as delays in data center (DC) construction.**
- Major AI firms are accelerating fundraising through various instruments, and investment has grown enormously to the extent of making their free cash flow negative in some cases. External demand for AI components such as semiconductors is lifting Asian growth. Monetization of investments should be more readily apparent in 2027, but downside risks are rather big, such as DC construction delays from supply constraints, return on AI business models less than hoped, and development regulation driven by safety concerns.
- Continued policy support such as energy subsidies raises downside risk via fiscal deterioration and higher interest rates. Long-term yields are rising on fiscal concerns and AI-firm bond issuance, and if liquidity dries up, less regulated non-bank financial institutions could retreat their lending sharply. AI demand is also lifting semiconductor and component prices that could cause additional inflationary pressure, so governments and central banks must juggle price stability, liquidity and growth.

Global Economic Outlook

Growth forecasts for major countries and regions revised up

▽Real GDP growth outlook (YoY, %)

	World Share 2025 (%)	2025	2026	2027	vs. previous outlook (May 2026)	
		Actual	Forecast	Forecast	2026	2027
World	100	3.4	2.9	3.4	0.2	0.3
Advanced economies	39.4	1.9	1.6	1.7	0.1	0.0
United States	14.6	2.1	2.0	2.0	0.0	0.0
Euro area	11.4	1.2	0.7	1.2	0.0	0.0
United Kingdom	2.2	1.3	1.0	1.0	0.6	0.2
Japan	3.3	1.2	0.7	0.8	0.2	0.1
(Fiscal year)	-	0.9	0.8	0.9	0.3	0.1
Other	7.9	2.9	2.8	2.3	0.3	0.1
Emerging economies	60.6	4.5	3.7	4.5	0.2	0.5
China	19.6	5.0	4.2	4.0	0.2	0.2
India	8.2	7.7	6.5	7.1	0.3	0.7
ASEAN-5	5.2	4.5	4.4	4.5	0.7	0.5
Central & Eastern Europe	7.6	2.0	1.9	2.1	0.3	0.1
Latin America	7.1	2.4	2.4	2.7	0.6	0.2
Middle East & Central Asia	7.5	3.7	0.7	6.5	-0.9	2.0
Sub-Saharan Africa	3.6	4.5	4.3	4.5	0.2	0.0
Other	1.9	6.1	6.6	6.2	0.0	0.0

(Note) Regional groupings follow the IMF; world shares are PPP-based; 2025 figures are IMF or national data. ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, Thailand. Taiwan and Korea are in "other advanced economies." Real GDP growth: Taiwan 8.6%/11.1%/6.0% for 25/26/27 (Executive Yuan); Korea 1.0%/3.5%/2.7% (Moody's).

(Source) Marubeni Institute

<Assumptions & Key Points>

- Previous (May 2026) assumption: the US and Iran agree to lift the Hormuz blockade by end-June; about 2 months of safety checks, then 2-3 more months for transit volumes to recover.
- Current assumption: transit through the Bab el-Mandeb and Hormuz straits recovers in March 2027. Until then, countries will keep on releasing reserves and restraining demand to minimize the growth impact.
- The oil price forecast is lowered slightly. Alternative sourcing and reserves kept the post-conflict panic brief, and the impact on India and ASEAN is expected stay limited. However, pass-through is spreading from fuels to related products and transport costs, and with AI-driven demand, upward price pressure persists in 2026.
- Pessimistic scenario: if the Hormuz blockade lasts beyond March 2027 with further damage to production facilities and prolonged disruption of detour routes, tight financial conditions will persist and global growth would be 2.0% in 2026 and 2.3% in 2027.
- AI investment stays strong into 2027, but credit risk for hyperscalers would gradually rise. With higher leverage in place, if 2027 - when monetization is expected to take off - fails to deliver returns justifying the huge capital spending to date, a major correction risk could emerge.

Middle East Situation

Developments Surrounding the Middle East

Six months of repeated military action and negotiation

Feb.	28	US and Israel launch strikes on Iran; Supreme Leader Khamenei killed (Mojtaba chosen as successor)
Mar.	1	Iran begins attacking vessels transiting the Strait of Hormuz (de facto blockade)
	2	Damage to energy facilities in neighboring states including Saudi Arabia and Qatar
	31	US average gasoline price tops \$4/gallon
Apr.	2-3	Iran downs a US fighter jet (the missing pilot is rescued by the 5th)
	8	Two-week ceasefire agreed (President Trump announced an indefinite extension on 4/21, but declared it over when full-scale attacks resumed on 7/8)
	11	Peace talks in Pakistan (no agreement)
	12	US announces a counter-blockade of the Strait of Hormuz
	17	Lebanon and Israel agree a 10-day ceasefire (repeatedly extended; on June 26 the US, Israel and Lebanon reach a trilateral framework, though Israeli strikes on Hezbollah in southern Lebanon continue).
May	25	US Central Command strikes Iranian military targets as "self-defense," and repeats similar strikes thereafter.
Jun.	9	A US Apache attack helicopter collides with an Iranian drone and crashes.
	17	The US and Iran agree and sign a memorandum toward peace talks. The next day the US Navy lifts the Hormuz counter-blockade. The 60-day conditions were not met and the memorandum effectively collapsed.
	22	The US lifts sanctions on Iranian crude and other goods, but re-imposes them on 7/7.
	26	President Trump orders retaliatory strikes on Iran for ceasefire violations; Iran retaliates against Gulf states. A new ceasefire takes hold on the 28th.
Jul.	7	Iran attacks Qatar-linked LNG carriers and others; the US resumes sanctions on Iranian crude.
	8	The US strikes Iranian military targets; President Trump declares the memorandum "terminated."
	12	From 7/12 the US military continues strikes on Iran for 13 consecutive days.
	14	The US resumes the Hormuz counter-blockade.
	18	Two US soldiers reported killed at a US base in Jordan by an Iranian attack; US fatalities total 16.
Aug.	25	Iran says it will halt attacks on the US as long as the US halts its own, but on the 28th launches a "surprise attack" on US forces.
	3	Iran discloses talks with Oman on managing the Strait of Hormuz; announces a final agreement on the 17th.
	9	Iran appoints Rezai, a hardline former IRGC commander, as secretary of the Supreme National Security Council

(Source) Marubeni Institute, based on various media reports

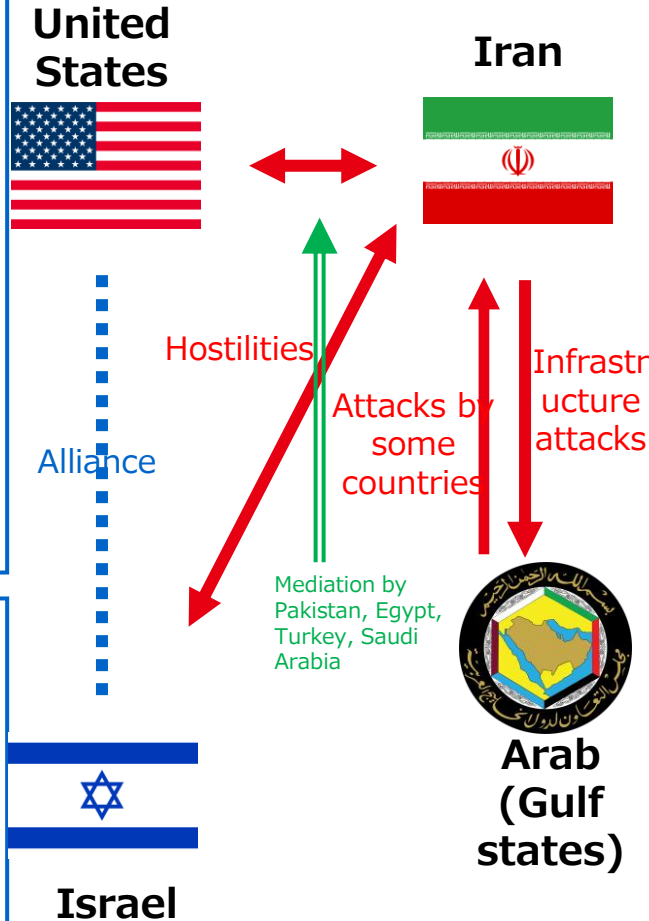
Each Country's Calculations on the Middle East

Seeking an early exit but unable to contain Iran

- Initially followed the "Venezuela model," aiming to install a client government quickly, but the conflict dragged on unexpectedly.
- Signed a heavily concessionary MoU to wrap up before July 4, but Iran again attacked ships transiting Hormuz, and the pro-Iranian Houthis began blockading the Red Sea detour route.
- The Trump administration is regrouping forces and raising pressure through sanctions, but still wants a deal with Iran.
- With November midterms ahead, further inflation is a direct political risk; a quagmire with rising casualties could unsettle its base. Concerns over missile stockpiles and production capacity are also growing.

Pursuing the thorough weakening of Iran

- Israel seeks to weaken or topple the Iranian revolutionary regime it sees as its greatest threat, but its own strike capacity is limited; drawing in the US brings major benefits.
- Israeli opinion initially backed the strikes but support has waned. The Netanyahu government, facing an October 27 election, may have sought to rally opinion through hardline action, but this has not necessarily boosted its support.
- With few options besides continuing the war, it has little room to change course.



Holding new leverage and shaking the US

- Outgunned, Iran favors asymmetric warfare via attacks on Gulf infrastructure and shipping. With the Hormuz blockade proven an effective deterrent, it aims to negotiate with the US as an equal.
- The memorandum was a chance to win big concessions, but Iran kept attacking ships to assert sovereignty over Hormuz, secure an edge in follow-up talks, and out of distrust for the US.
- Despite losing Ayatollah Ali Khamenei and other senior figures, the revolutionary system endures and hardliners now sit at the center of decision-making, readying for a large clash with the US. Further escalation, though, risks US strikes on oil facilities or a ground invasion, causing irreversible economic loss or regime collapse.

Breakdown of the safety myth; seeking to avoid further harm

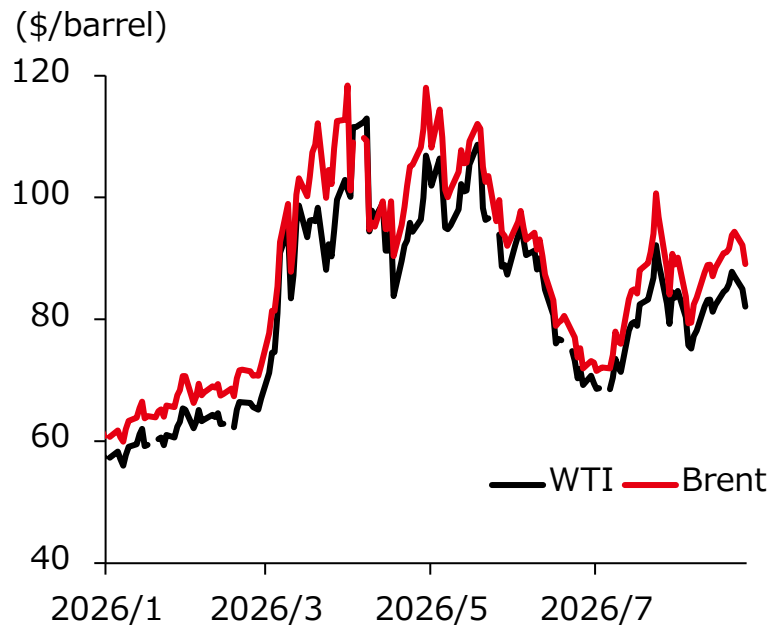
- Damage to civilian facilities and unstable energy exports have badly eroded the safety myth underpinning development. The limits of depending on the US are exposed, yet self-reliant defense is difficult.
- While stressing they will not tolerate Iranian attacks, Gulf states focus on negotiation and mediation. Oman held solo talks with Iran to reopen Hormuz early, drawing US pushback and leaving it caught in between.
- With the UAE moving closer to Israel, the Gulf states are far from unified.

Crude Oil: A Fragile “Shrinking Equilibrium”

Prolonged tensions raise fears of a tight market

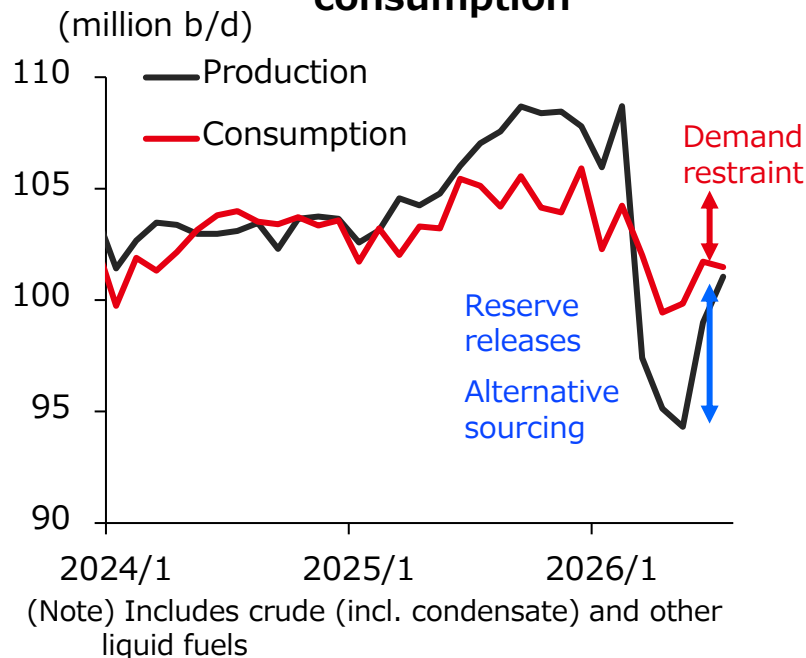
- Oil prices spiked above \$110 before falling on the June memorandum, and have since swung widely with the situation.
- The pre-conflict market was oversupplied, but most spare capacity sits inside the Strait of Hormuz. So improvements push prices down, while stalled transit keeps the balance prone to tightening. Since the conflict, Middle East-dependent countries have maintained a fragile “shrinking equilibrium” via stock releases, alternative sourcing and demand restraint.
- Hormuz transit has slumped again, and exports via the Red Sea detour have grown unstable amid rising blockade risk from pro-Iranian forces since late July. With stalled Middle East exports likely prolonged, falling spare export capacity in alternative suppliers such as the US are expected to tighten, likely forcing further stock releases. Over the medium to long term, the shift away from oil should ease the balance.

▽Crude oil price (front month futures)



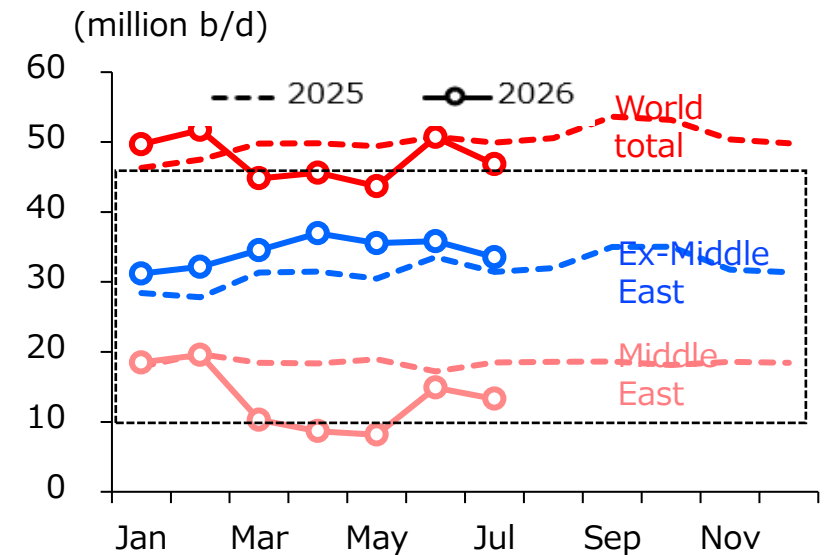
(Source) LSEG; latest: August 25, 2026

▽World crude oil production and consumption



(Source) US EIA; latest: July 2026

▽Crude oil exports

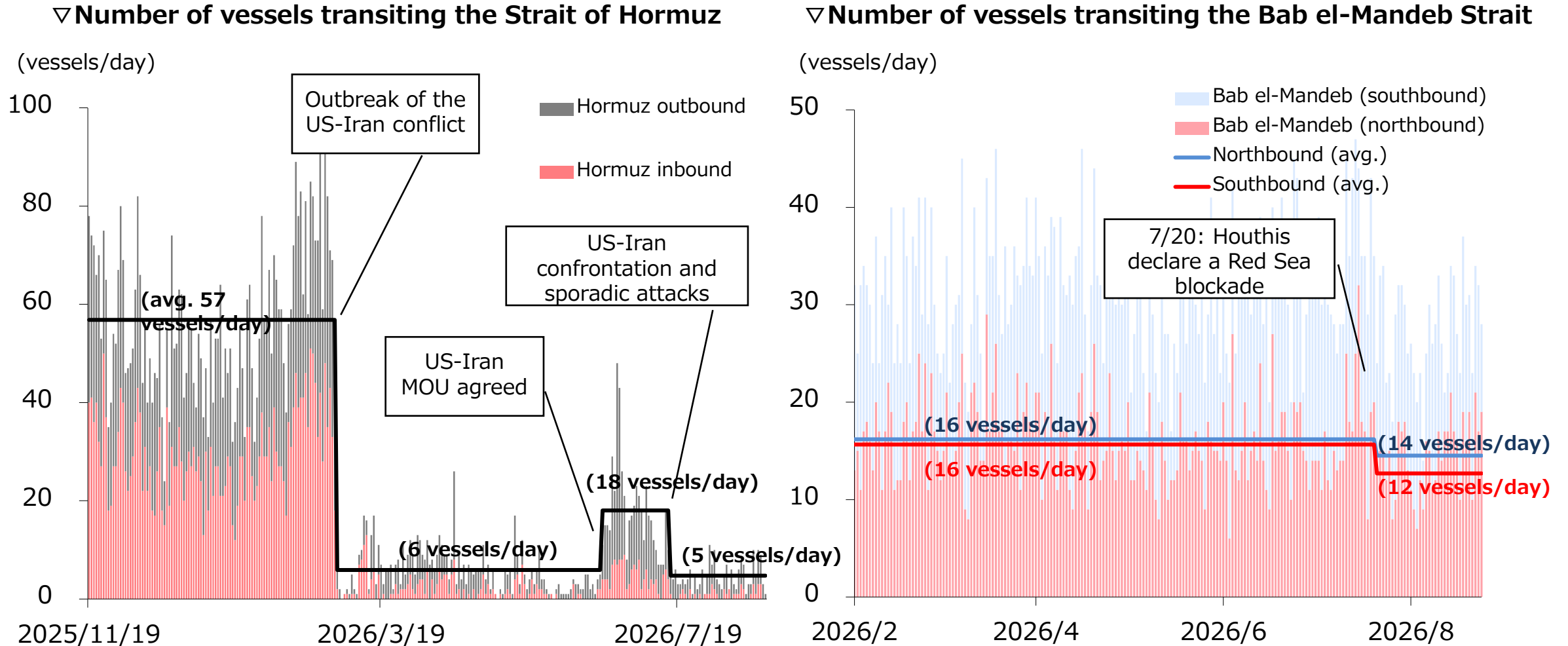


(Note) Includes estimates based on scheduled departure dates. Middle East = Iran, Iraq, Israel, Qatar, Oman, Kuwait, Saudi Arabia, Syria, UAE (9 countries)

(Source) LSEG; latest: July 2026

Vessel Transits at Chokepoints

Hormuz slumps again and Bab el-Mandeb turns unstable



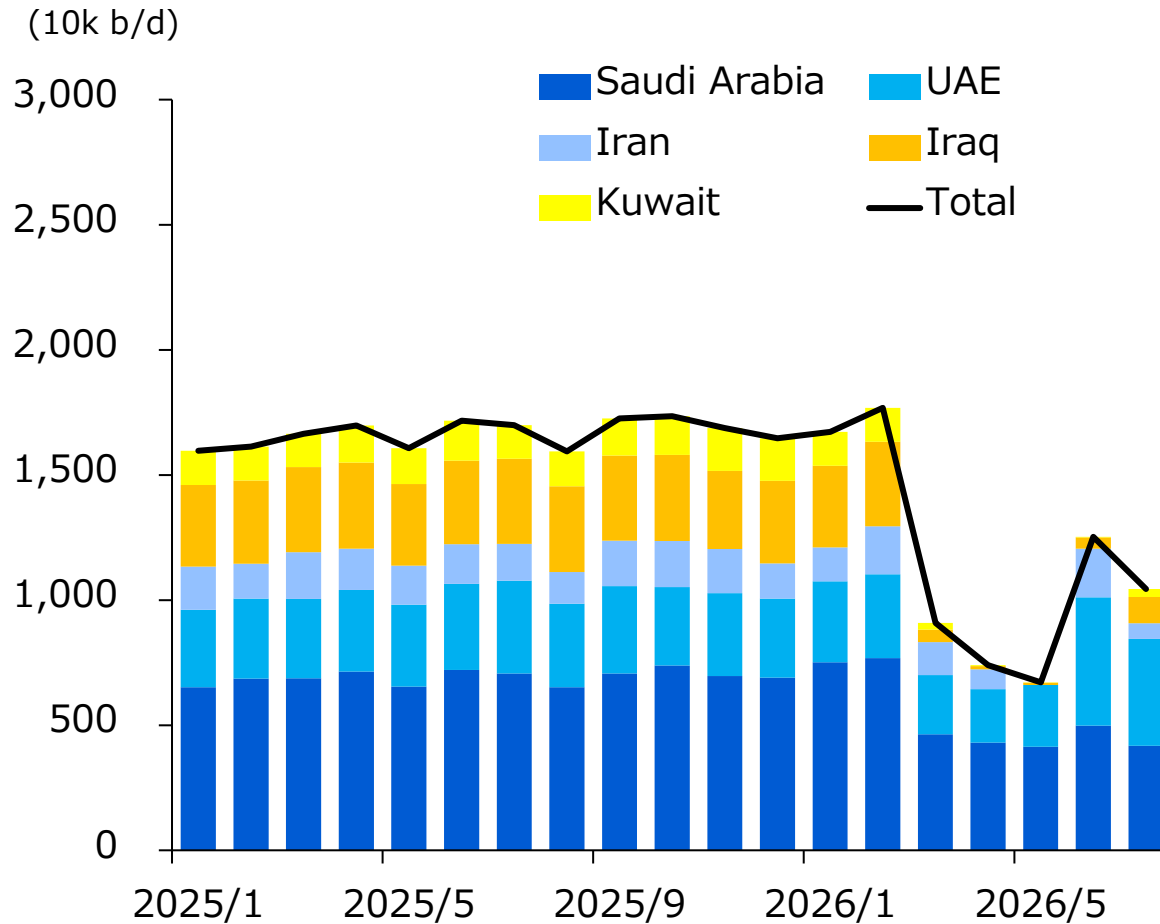
(Note) Some vessels cannot be tracked due to AIS signal blocking. Coverage: dry bulk (>10k DWT), container (>=1 TEU), crude/oil tankers (>10k DWT), LPG (>1,000 DWT), LNG (>10k DWT). DWT = deadweight tonnage; TEU = twenty-foot equivalent unit.

(Source) LSEG; latest: August 24, 2026 (daily data)

Middle East Crude Oil

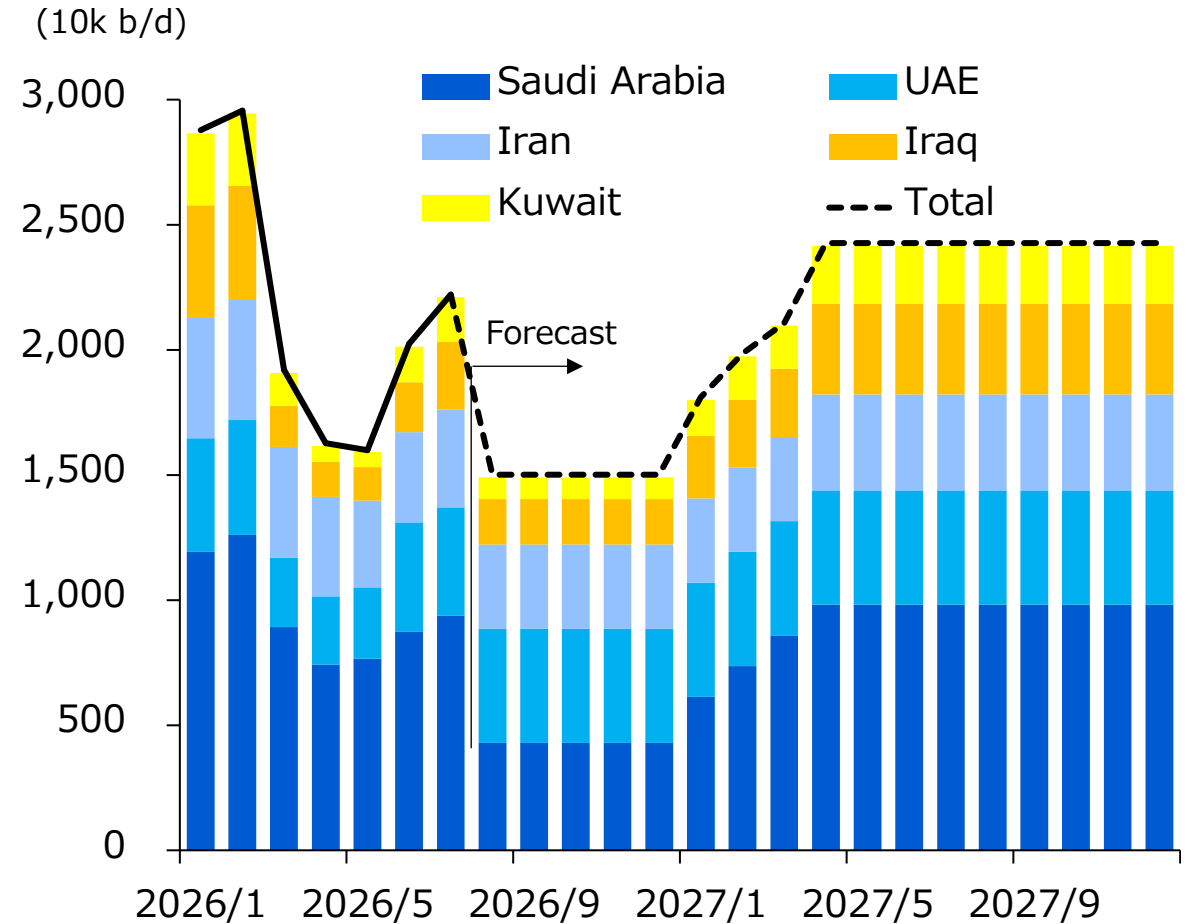
Output expected to fall into year-end, then recovers but stays below pre-conflict levels

▽Crude exports of major Gulf producers



(Note) Includes estimates based on scheduled departure dates.
(Source) LSEG

▽Crude output outlook for major Gulf producers

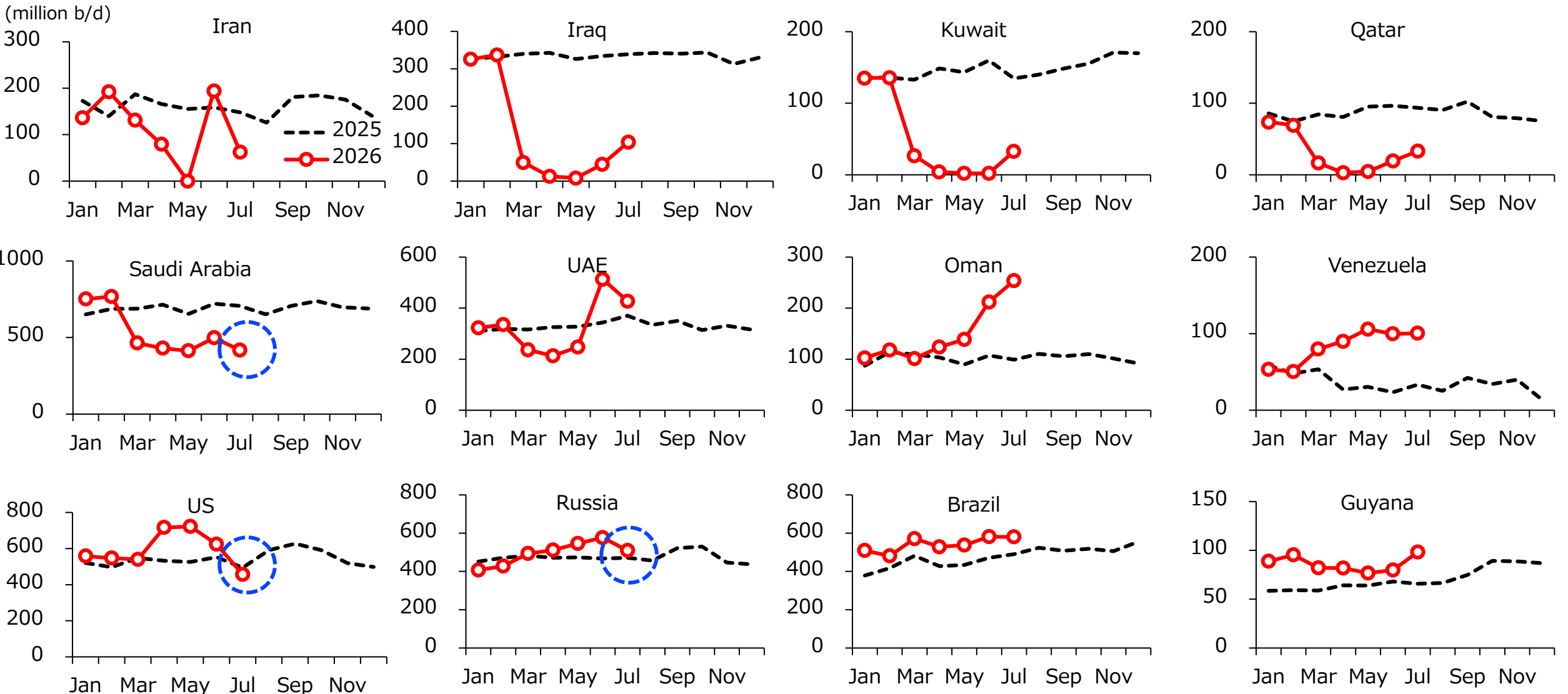


(Note) Gulf output declines into end-2026 on stalled transit and unstable detour routes, then recovers but is assumed to remain about 20% below pre-conflict levels even at end-2027.

(Source) EIA; Marubeni Institute

Oil Export Trends

Middle East exports recovered after the MOU and alternative sourcing advanced



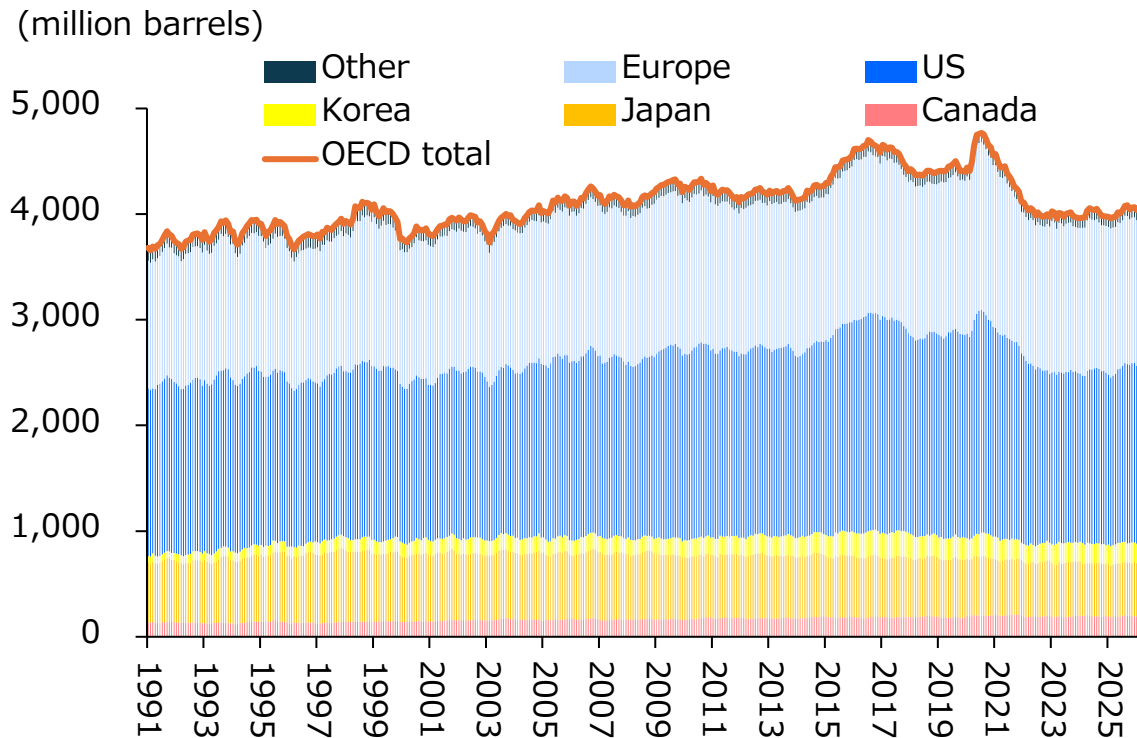
(Note) Includes estimates based on scheduled departure dates. Blue circles: countries with detour routes or key alternative suppliers that may see spare export capacity shrink.
(Source) LSEG; as of August 17, 2026

Oil Inventories

Aggregate stocks are adequate, but depletion risk rises in some countries

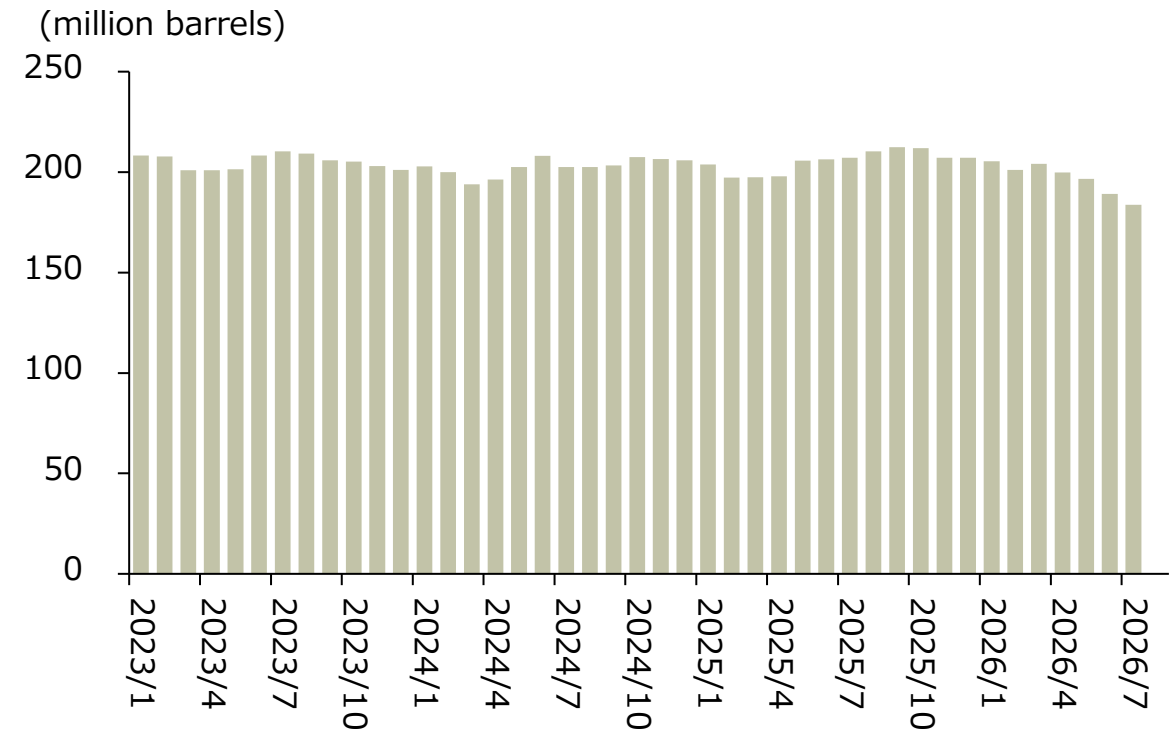
- According to the IEA, observable global oil stocks have fallen 410 million barrels since the clash, to just under 7.9 billion barrels at end-July. Stocks that actually function as usable supply are likely lower than the headline figure given storage conditions, crude grades and logistics/infrastructure constraints.
- Japan and China have drawn down stocks and US inventories have also fallen, while European stocks remain high. Inventory data is difficult to track for many Middle East-dependent emerging economies, which may have limited reserves; a prolonged halt in Middle East exports would raise depletion risk.

▽Oil inventories in OECD countries



(Source) EIA; sum of commercial stocks and strategic reserves; latest: May 2026

▽Crude inventories at major Chinese ports

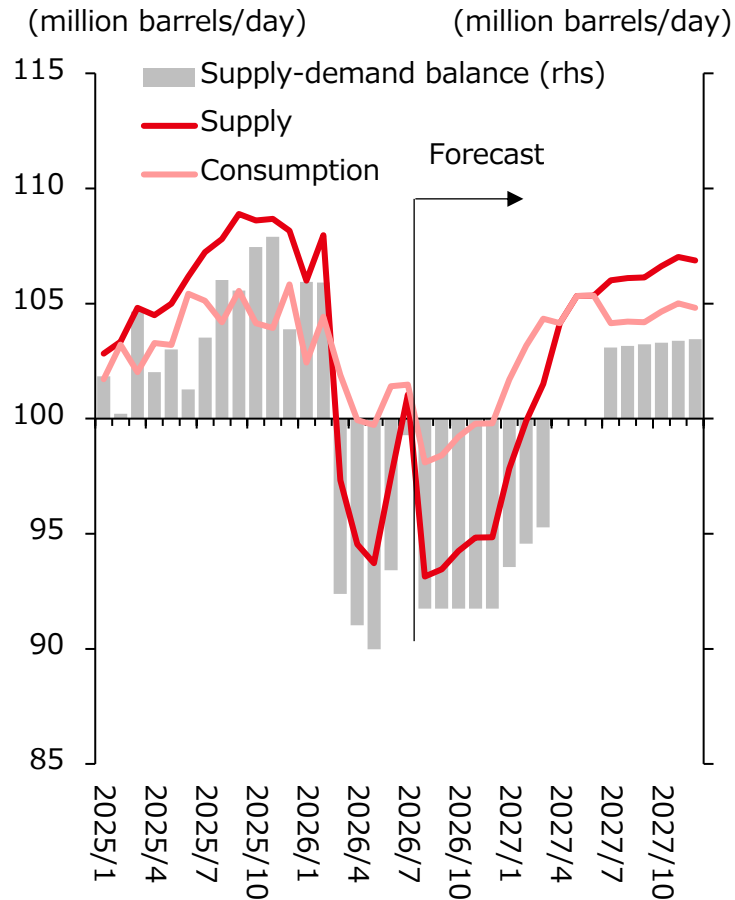


(Source) LSEG

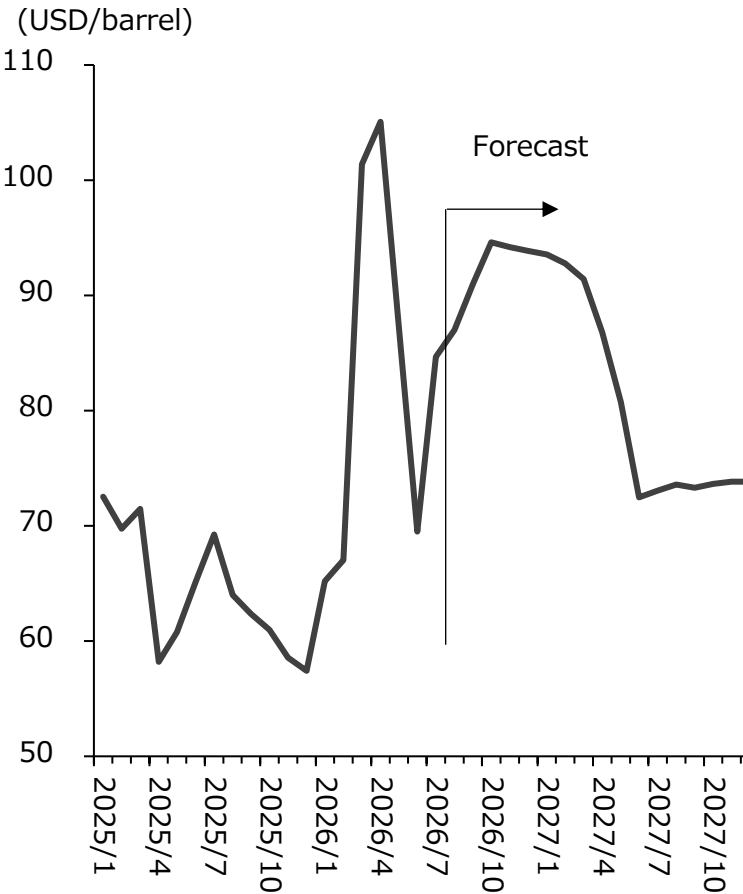
Middle East: Crude Oil Price (WTI Basis)

Prices stay high near \$90 this year, falling to the \$70s by end-2027 as output recovers

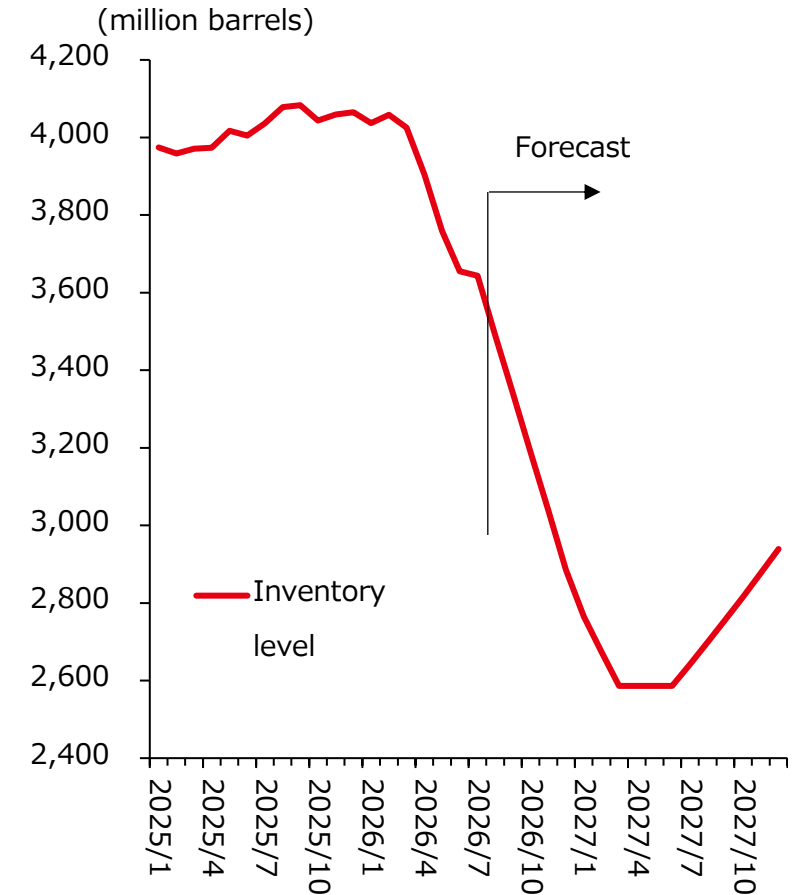
▽Crude supply-demand outlook



▽Crude oil price outlook



▽OECD oil inventory outlook (commercial stocks + strategic reserves)



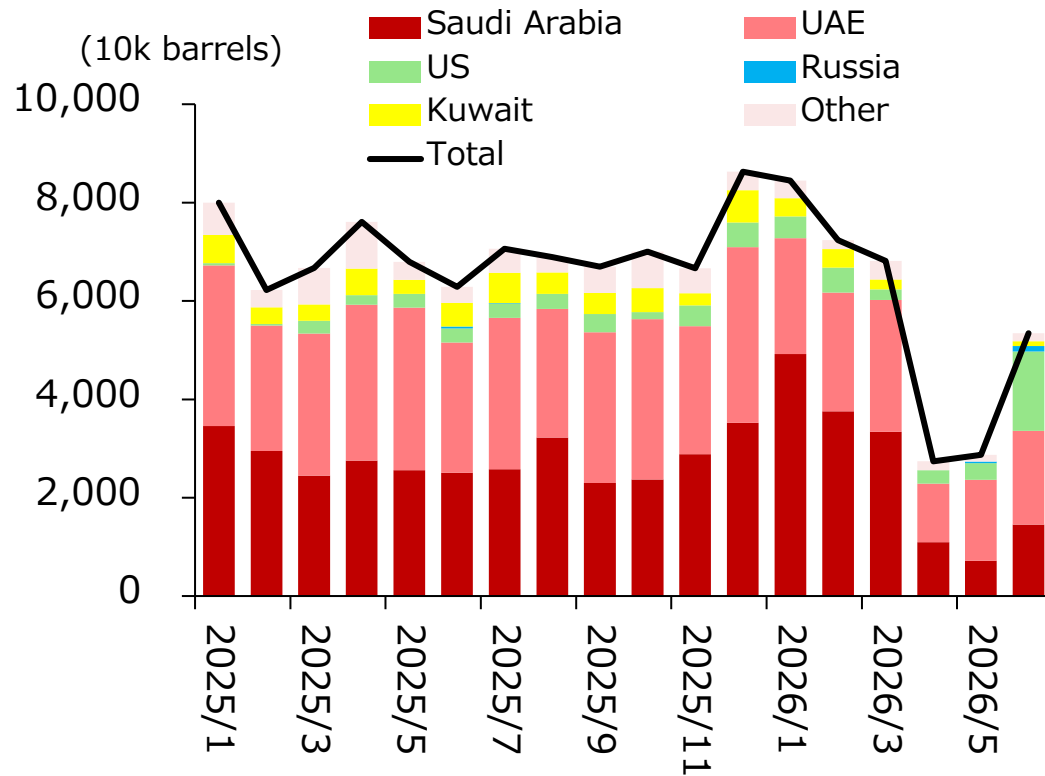
(Note) The price outlook is based on a structural VAR model of four variables - crude supply, consumption, inventories and price - with conditional forecasts under assumed future paths for supply, consumption and inventories. Structural shocks are identified using a Cholesky decomposition with the causal ordering above.

(Source) Marubeni Institute, based on EIA and LSEG

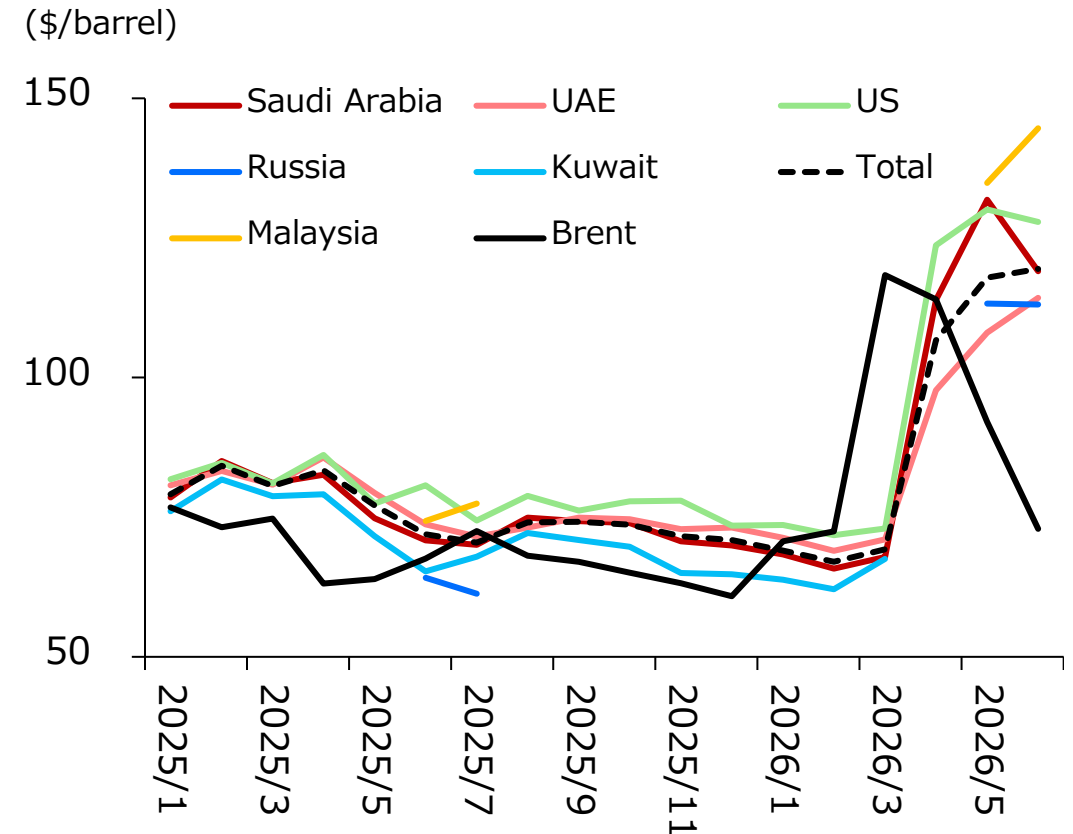
Japan's Crude Oil Procurement

Japan responds with alternative sourcing and reserve releases

▽Japan's crude oil imports



▽Japan's crude oil import unit price



(Source) Ministry of Finance (HS code 2709.00-900)

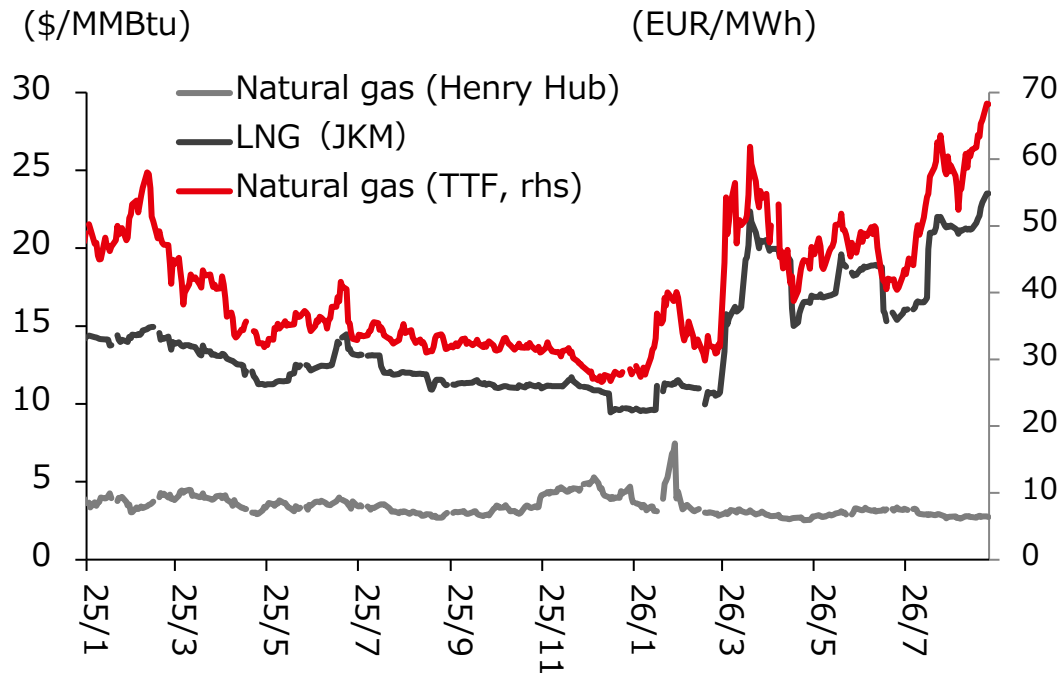
(Source) Marubeni Institute, based on Ministry of Finance statistics; HS code 2709.00-900

Middle East: Natural Gas and LNG

Continued tightness puts alternative supply capacity to the test

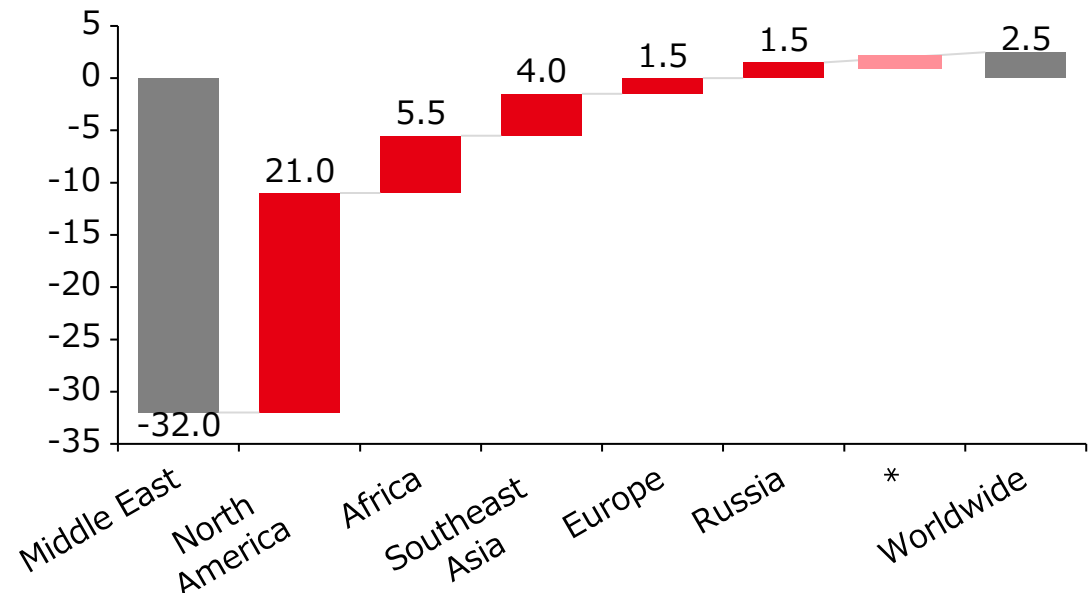
- With the de facto closure of Hormuz and damage to production facilities, about 20% of global LNG supply - mainly Qatari - faces supply-constraint risk. Alternative supply from the US, Africa and Malaysia kept global LNG trade volumes steady in H1 2026, but high prices caused a slight dip in gas demand.
- However, with heating demand rising in the Northern Hemisphere winter and limited spare capacity outside the Middle East, tightness should become more pronounced from end-2026 into early 2027, keeping prices elevated. Pipeline constraints, notably in the US Permian Basin, could bottleneck output growth, so whether supply additions proceed as planned will heavily influence the balance.

▽ Gas prices



(Source) LSEG; as of August 25, 2026

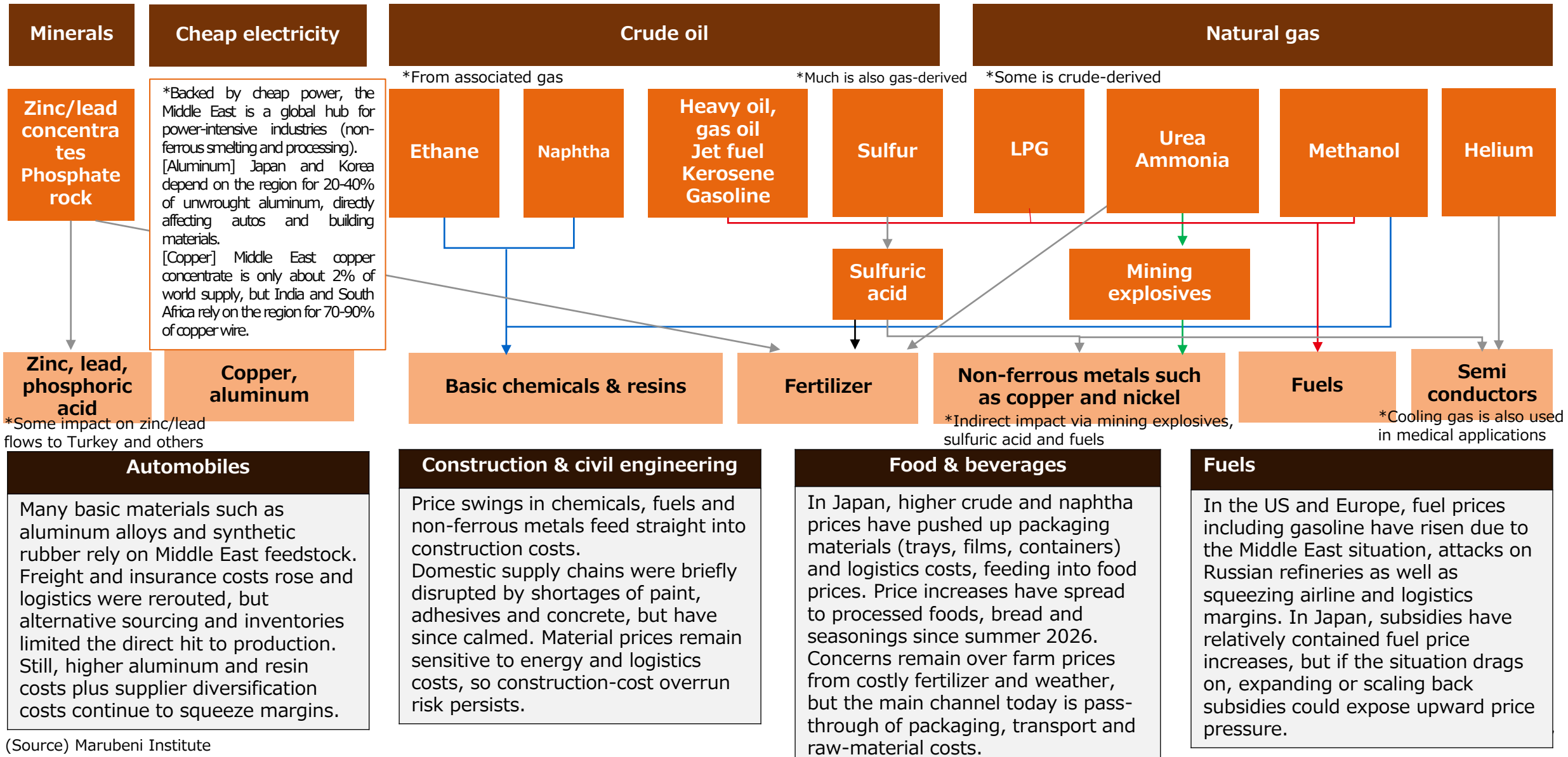
▽ Actual replacement supply for Middle East LNG (Jan-Jun, YoY)



Middle East: Qatar, UAE; North America: US, Canada; Africa: Senegal, Mauritania, Nigeria; Southeast Asia: Malaysia; Europe: Norway; * other projects and adjustments

(Source) Marubeni Institute, based on IEA

Middle East: Impact on Supply Chains



Middle East: Potential Structural Shift in Energy Procurement

- Now: countries highly dependent on fuel imports are adopting policies that support structural change - energy-efficient equipment and electrification - beyond immediate crisis response.
- Ahead: alongside security and decarbonization policy drivers, persistently high fuel prices could add aversion to fossil fuels as another push for electrification.

▽ Measures to strengthen energy security ▽ Major countries' energy crisis responses

Time frame	Type	Measures
Short term	Crisis response	• Reserve releases • Switching suppliers • Securing alternative routes • Demand restraint
Medium term	Redundancy	• Expanding reserves • Diversifying suppliers (countries, companies) • Dual-tracking logistics networks
Long term	Structural shift	• Diversifying energy sources • Energy efficiency • Electrification (transport, heating/cooling, industrial heat) • Diversifying power generation (more renewables, renewed look at nuclear)

Signs appear relatively early in consumer electrified equipment

(Source) Marubeni Institute

Country/region	Structural transition policies	
	Efficiency	Electrification etc.
Philippines	○	
India		○
Vietnam	○	○
Malaysia*	○	○
Singapore	○	
Thailand		○
Taiwan	○	○
Bangladesh		○
Japan	○	
China	○	○
United Kingdom	○	○
Spain	○	○
France		○

*In the tracker, Malaysia is listed under Other (structural reform) rather than Electrification.
(Source) IEA, "2026 Energy Crisis Policy Response Tracker," accessed August 20

▽ Drivers of electrification

Energy security (momentum ↗)

- Clean power is not a prerequisite

Decarbonization (momentum →)

- Adding clean power amplifies decarbonization

Economics (if fuel prices stay high)

- vs. incumbents (ICE vehicles, boilers), electrified equipment (EVs and heat pumps) improve cost efficiency

(Source) Marubeni Institute

▽ EV sales growth, March-June (YoY)

Asia-Pacific (excl. China)	+101%
Southeast Asia	+62%
Latin America	+130%
Europe	+33%

(Source) IEA, "Electric Car Markets in a Time of Uncertainty" 18

Supply Chain Risks that Go Beyond the Middle East

Geographic chokepoints, economic chokepoints and extreme weather

- Supply chain vulnerability lies not in the Middle East itself but in dependence on specific nodes. Similar risks extend to critical minerals, tariffs and export controls, and extreme weather, so companies must prepare for multiple economic chokepoints, not just the Middle East. More than ever, they need the ability to switch suppliers flexibly in a crisis.

▽ Examples of supply constraints that threaten supply chains

Geographic chokepoints

Physical nodes of maritime traffic. When blockades, attacks or transit limits force detours, voyage times, freight rates and insurance premiums rise.

Examples:
Suez Canal, Bab el-Mandeb Strait, Strait of Hormuz
Panama Canal
Around the Taiwan Strait
Around the Bosphorus



Economic chokepoints

Restricting access - via export controls, sanctions or supply limits - to markets, resources, technologies or payment networks where a country or firm holds dominance. The more concentrated supply and alternatives are, the stronger the economic pressure.

Examples:
Dependence on large markets (US, China)
The dollar settlement system (US)
Critical minerals (China)
Advanced semiconductors (US)



Climate and natural risks

Extreme weather and disasters simultaneously impair shipping routes, ports, plants and agricultural/fishery output. Local natural events spill over into global supply chains - e.g. drought-driven Panama Canal transit limits, or higher crop and feed prices.

Examples:
El Nino
Extreme weather such as droughts and floods

■ Since July, Houthi attacks and threats on Red Sea routes have flared again, raising navigation risk in the Bab el-Mandeb Strait.
Tensions in nearby waters including the Taiwan Strait hit Japan's import routes directly. If broad sea areas come under threat, temporary import disruptions are conceivable.

■ China has widened its ban on dual-use exports to Japan and added US critical-minerals firms to its export control list.
The US announced comprehensive tariffs covering nearly all countries in 2025; even after court rulings, additional and product-specific tariffs continue to be considered and applied.

■ A strong El Nino is feared this year, and extreme weather is already occurring in many regions. Europe saw a heat dome, and India's monsoon rainfall was more than 40% below normal. The Panama Canal began draft restrictions on July 3 and transit limits from September 4.

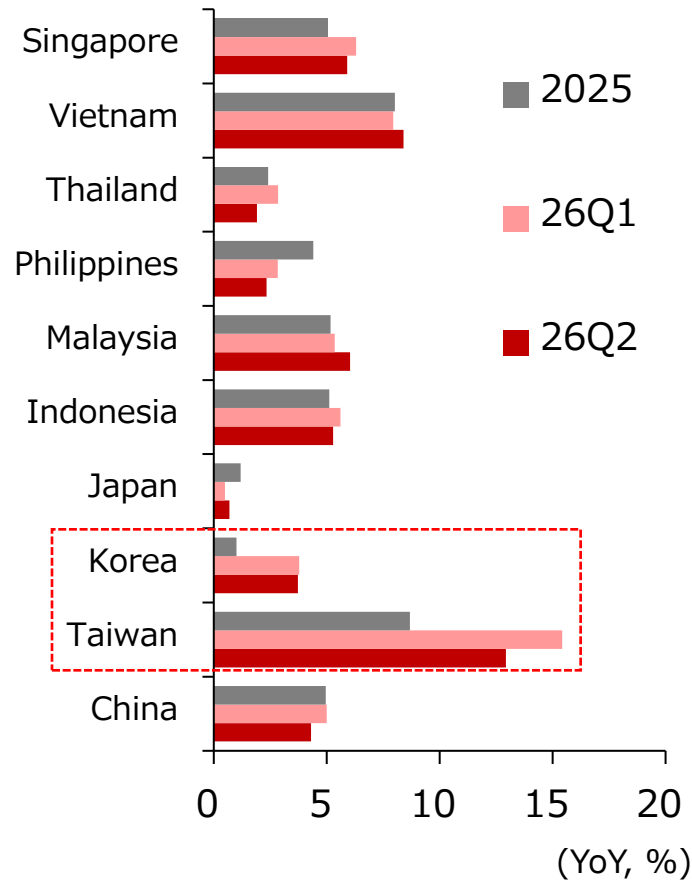
■ The more a supply chain is optimized on assumptions of free movement and trust, the more disruption at a single node cascades into broad supply constraints.

AI Impact

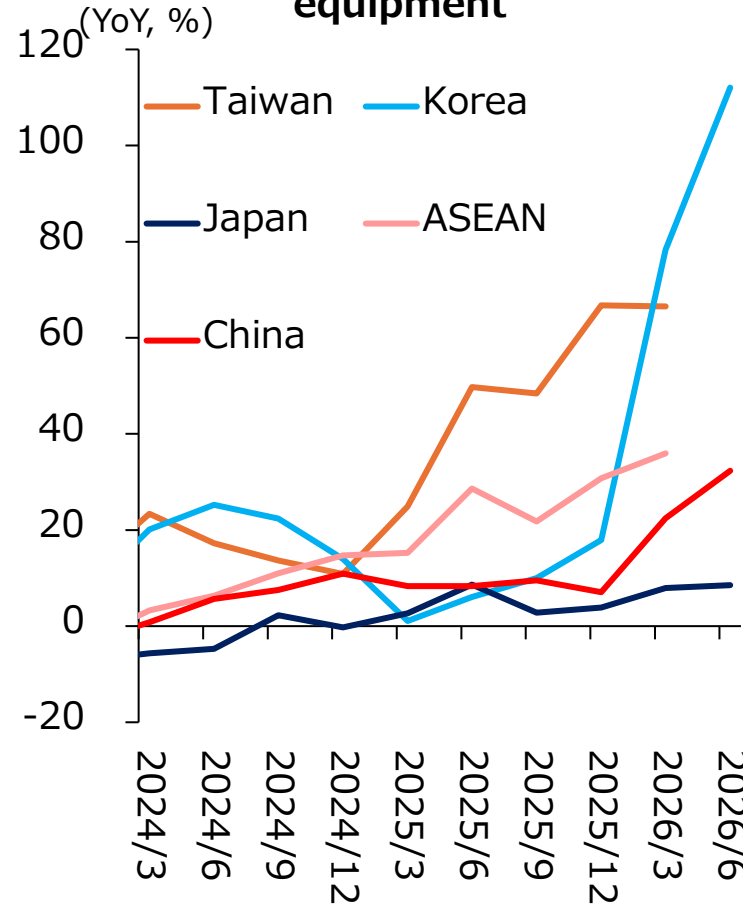
Rising AI Demand Drives Asian Growth

Led by Taiwan and Korea, exports of semiconductors and servers are surging

▽ Real GDP growth



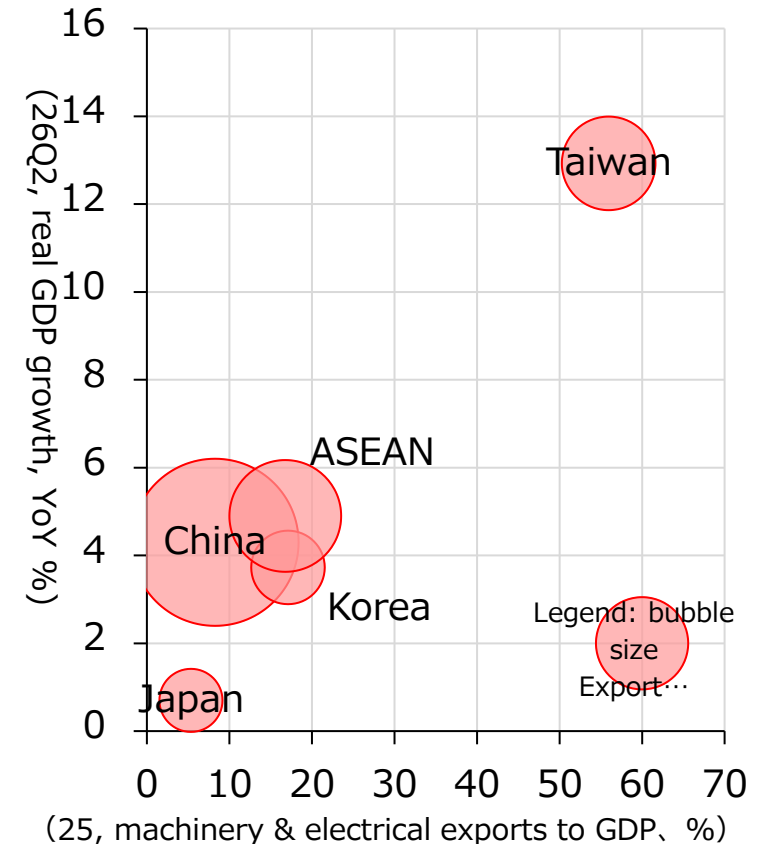
▽ Exports of machinery and electrical equipment



(Note) Sum of 2-digit HS codes 84 (machinery and parts) and 85 (electrical equipment). HS84 includes computers/communication devices and semiconductor production equipment; HS85 includes ICs, memory and other semiconductor products.

(Source) Marubeni Institute, based on the International Trade Centre (ITC)

▽ Machinery and electrical equipment exports as a share of



(Note) Bubble size = machinery and electrical equipment exports (2025)

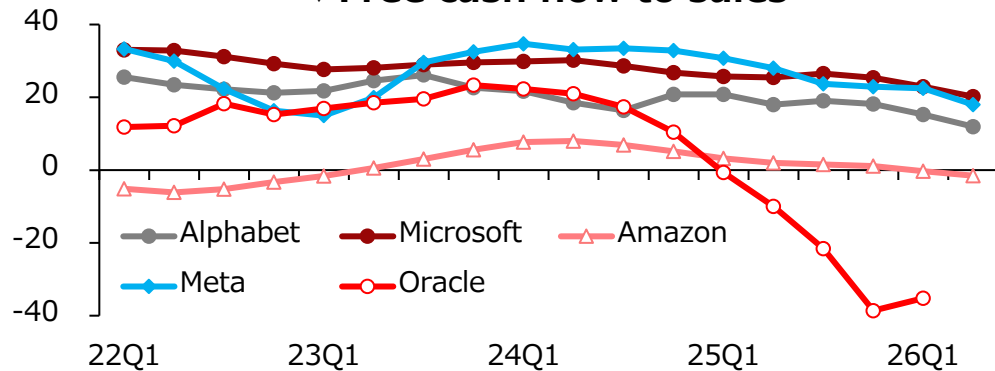
(Source) Marubeni Institute, based on ITC, IMF and CEIC

Market Attention Shifts from the Scale of AI Investment to its Return

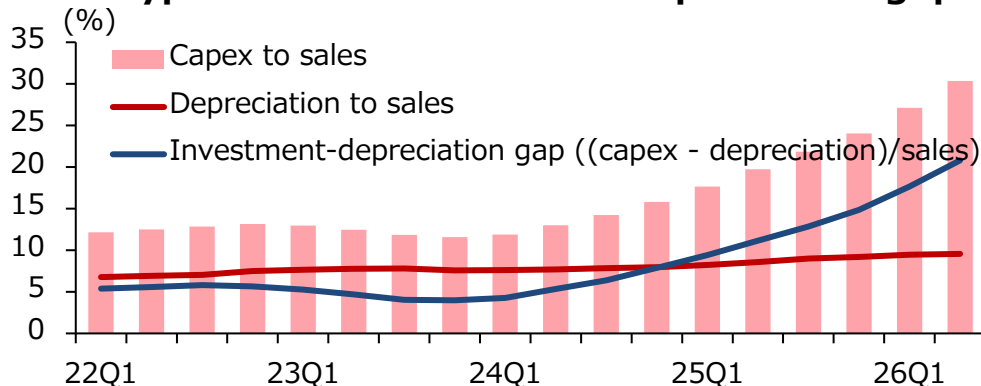
Corporate cash flow deteriorates; uncertainty puts downward pressure on stock prices

- With huge capex running ahead of realizing returns, some firms show deteriorating cash flow and a widening gap between investment and depreciation raising concerns about future depreciation burdens. As funding through bond issuance accelerates, investor's capacity is being strained, and credit spreads are widening. Amid concern on future returns and cheap, high-performance Chinese models weighing on the market share of US made, large capital stock is sometimes viewed negatively despite rapidly growing earnings.

▽ Free cash flow to sales



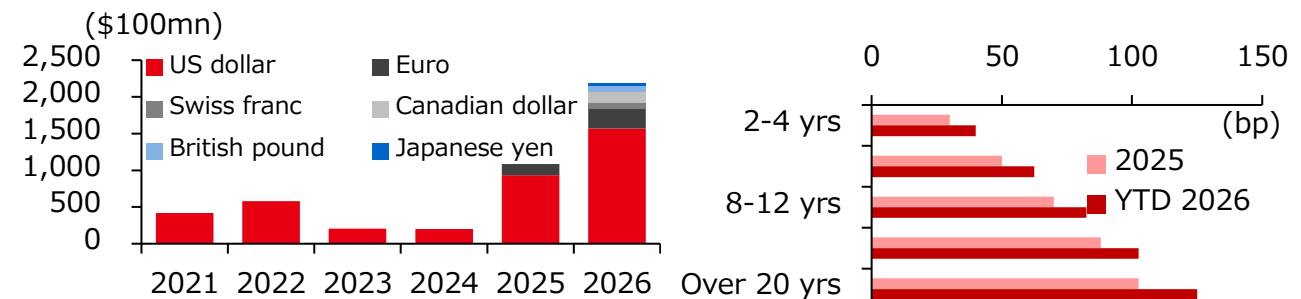
▽ Hyperscalers' investment-depreciation gap



(Note) Hyperscalers = Alphabet, Amazon, Meta, Microsoft, Oracle. Both charts are 4-quarter moving averages. Fiscal years: Microsoft Jul-Jun, Oracle Jun-May, others Jan-Dec; non-calendar fiscal years adjusted to a CY basis.

(Source) LSEG

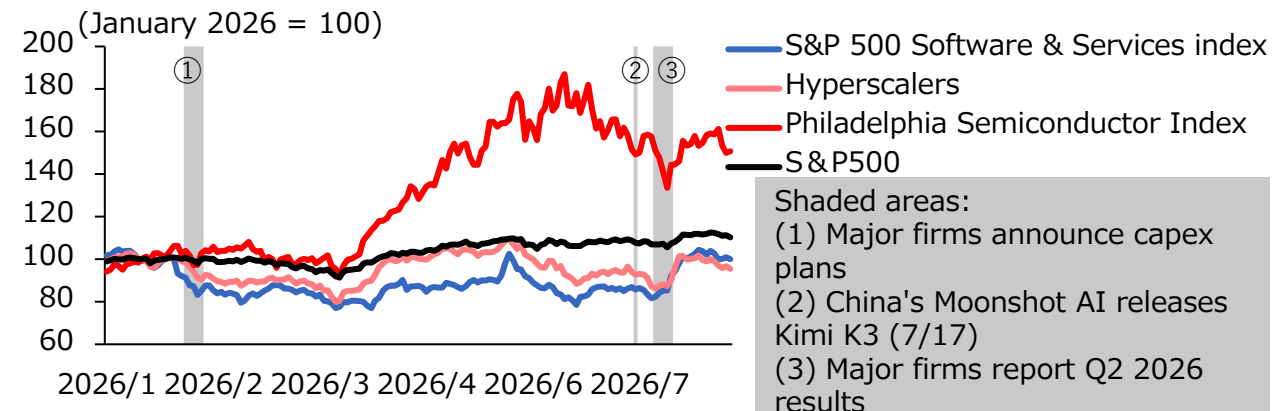
▽ Hyperscaler bond issuance and spreads



(Note) As of August 12. The right chart shows median spreads to same-maturity US Treasuries for Alphabet, Amazon, Meta and Oracle; Microsoft has issued no qualifying bonds since 2025.

(Source) LSEG

▽ AI-related share price trends



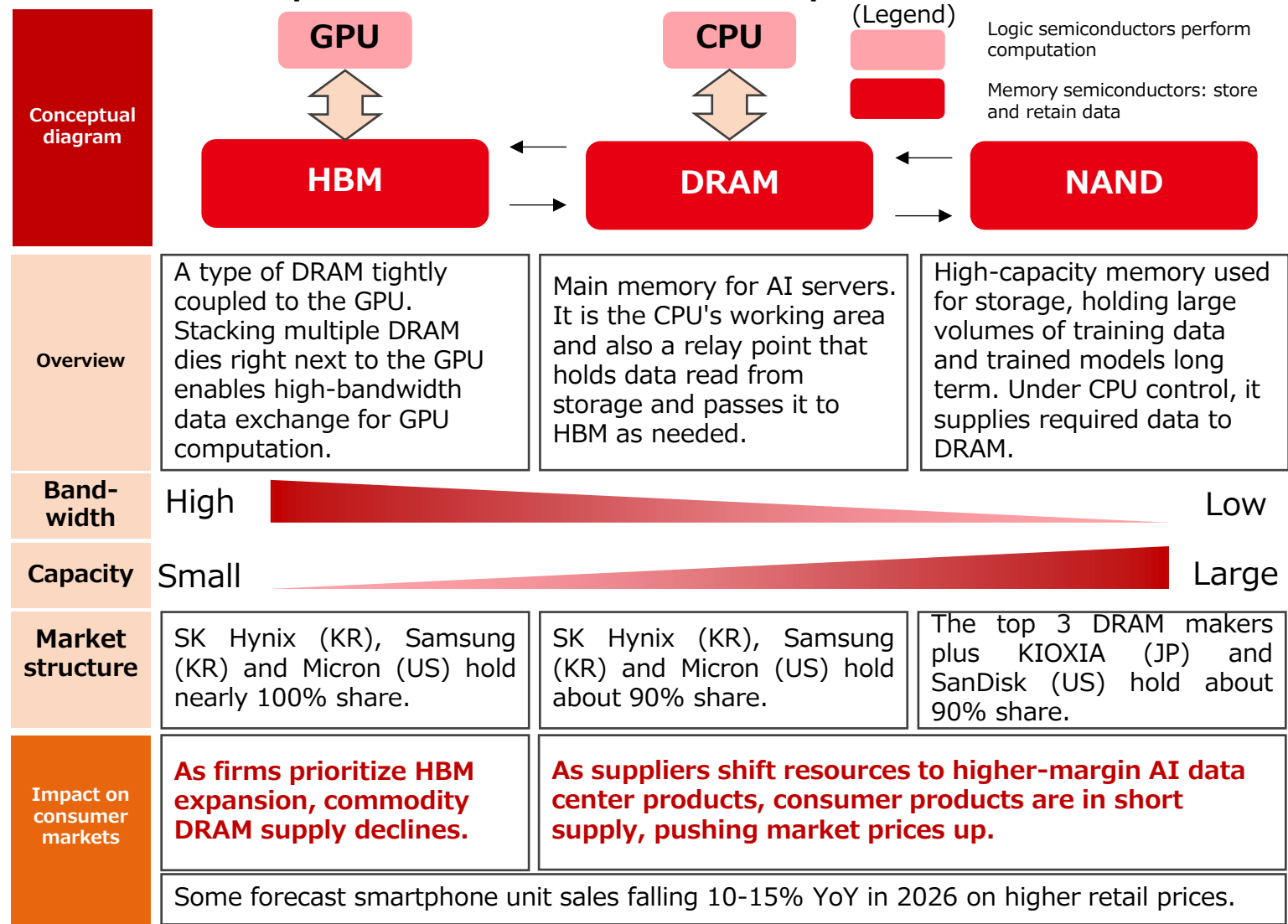
(Note) Hyperscaler share prices are an equal-weighted average

(Source) LSEG

Growing AI Data Center Demand Push Ups Memory Chip Prices

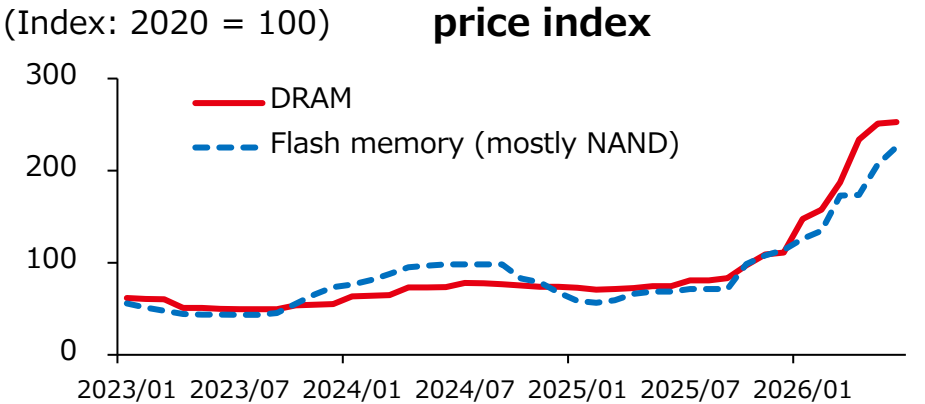
A production shift toward AI data center use affects a wide range of IT products

▽ Chips used in AI data centers and price trends



(Source) Marubeni Institute, based on SemiAnalysis, TrendForce, IDC and media reports

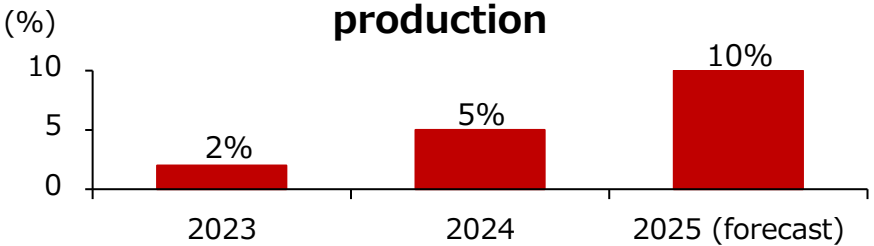
▽ Korea's memory export price index



(Note) Korean firms hold large DRAM and NAND shares, so Korean export prices serve as a proxy for market prices. Flash memory prices include NOR as well as NAND, but as most is NAND they are used as a proxy for NAND market conditions.

(Source) Bank of Korea

▽ HBM as a share of DRAM production



(Note) HBM as a share of DRAM output (bit basis). HBM is harder to produce than commodity DRAM (yields 20-30% lower, production 1.5-2 months longer), so it strains capacity more.

(Source) TrendForce

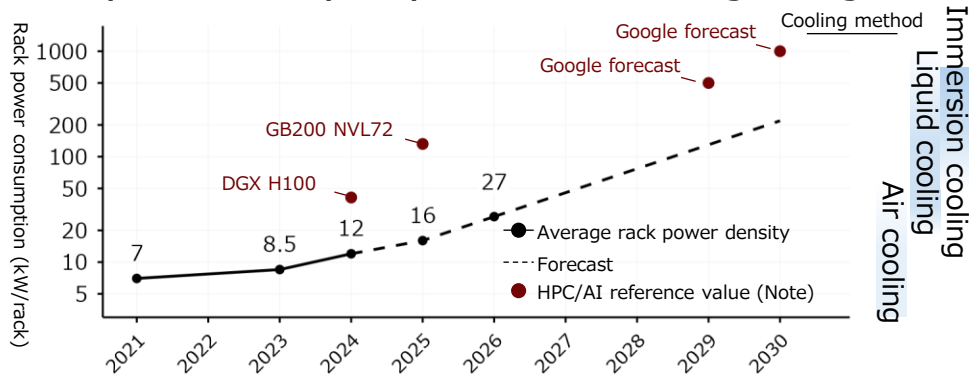
Equipment obsolescence which could be caused by a 'mismatch'

GPUs refresh about every 2 years while power and cooling equipment lasts 10-30

(1) Rising AI demand raises power and cooling requirements

- ✓ As AI demand grows, GPUs get more powerful and servers denser, raising heat output per rack
- ✓ **More advanced power and cooling facilities are being required**

▽ Trends in power consumption per rack and matching cooling methods

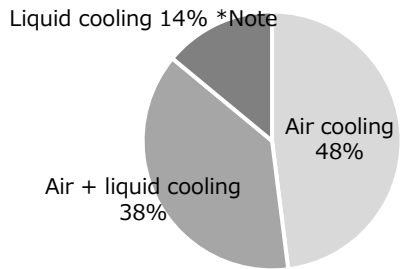


(Note) Figures for flagship models in high-performance applications

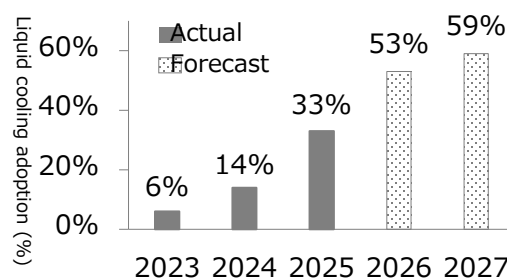
(Source) Marubeni Institute, based on AFCOM, Uptime Institute and company disclosures

(2) Adoption of DC cooling methods: actual and forecast

▽ Existing DCs in 2024 (1)



▽ Liquid cooling adoption (2)



(Note) Only a portion of these DCs use immersion cooling

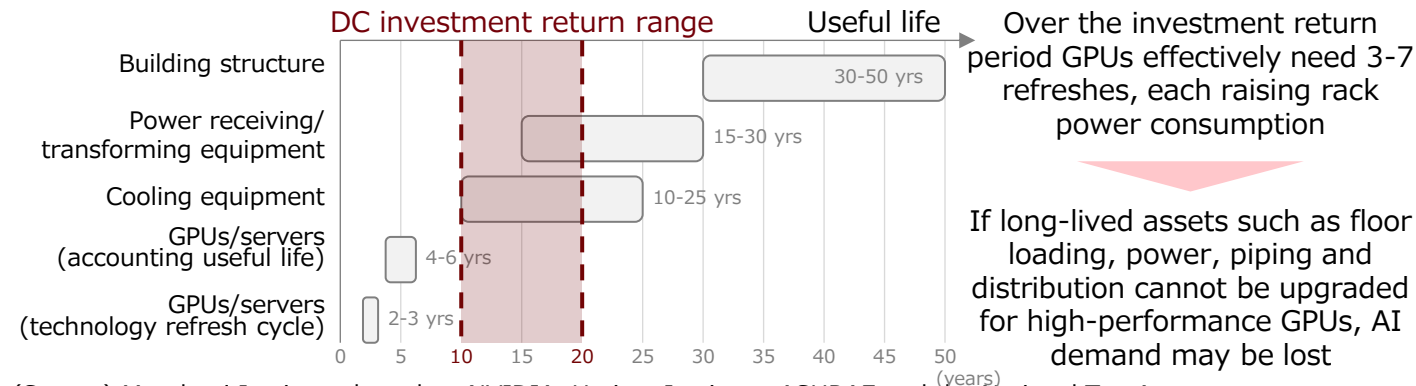
(Source) 1. S&P Global 451 Research

2. TrendForce

(3) Mismatch between long-lived assets and the GPU refresh cycle

- ✓ GPUs refresh roughly every 2 years, while buildings and power equipment are assets of 15-50 years
- ✓ Multiple equipment refreshes are needed within the investment return period, creating additional investment and asset-impairment risk. There is also the constraint of whether cooling and power equipment can be upgraded to match GPU progress

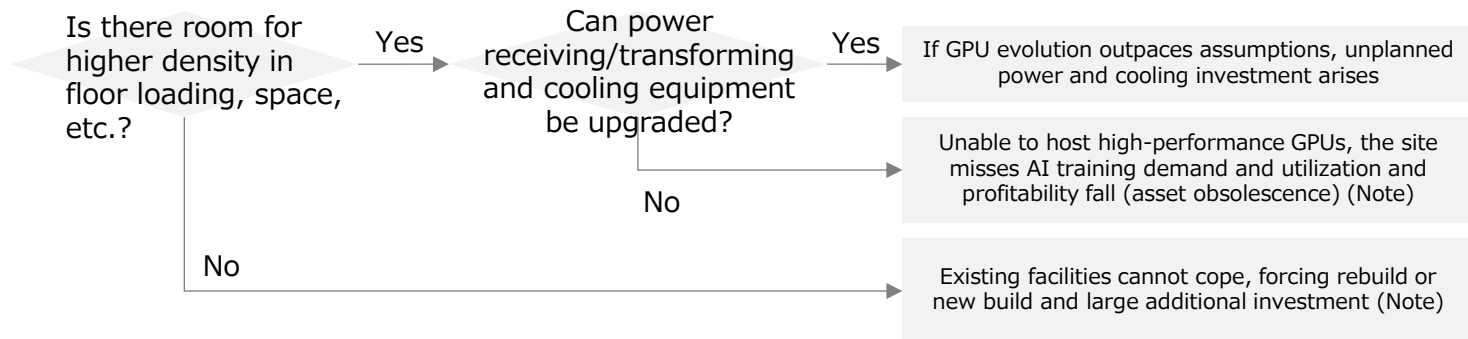
▽ Useful life of DC components and the investment return range



(Source) Marubeni Institute, based on NVIDIA, Uptime Institute, ASHRAE and the National Tax Agency

(4) Patterns of investment return risk at existing data centers

Decision flow for existing DCs responding to rising AI demand



(Note) This flow assumes continued use for training. Repurposing to lower-capability inference is possible, but cost performance would likely be worse than a purpose-built inference DC.

Complex Web of Interests among Major Players over AI Regulation

▽Key issues in AI regulation

Frontier models

Concerns about misuse for cyberattacks or weapons development and human rights violations are driving calls for government safety reviews, while fear of falling behind in the development race restrains excessive regulation. In the US, pre-release review is currently voluntary, though there are cases of release-halt orders under export control law.

Open-weight models

Run not only in the cloud but in user environments and are relatively freely tuned or retrained, they raise concerns about misuse for cyberattacks. Industry calls for preserving free development and deployment, but as capabilities rise, regulatory debate may gain momentum.

Countries of concern

Suspensions that models from 'countries of concern' distill (see note) domestic models have prompted talk of sanctions on their developers. Other issues include such countries' access to domestic models and services and inflows of their hardware.

Sovereign AI

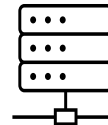
For security and industrial competitiveness, countries seek to reduce dependence on the US and China, mainly through indirect approaches such as development support and public procurement rather than direct regulation. Full autonomy including infrastructure remains difficult.

▽The US AI tech stack and AI regulation

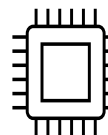
Model
development



Cloud



Semiconduct



Concern over shocks from excessive regulation

- Rules on developing and releasing frontier models limit managerial freedom, but also raise entry barriers against rivals and foster expectations of innovation.
- Restricting Chinese models on security grounds eases competitive pressure.

- Wider use of low-cost models, including open-weight models, increases compute demand - a positive.

- Wider use of low-cost models, including open-weight models, increases compute demand - a positive.
- China building its own AI ecosystem, chips included, is a threat. Continuing chip exports to China partly aims to curb rivals' growth; firms may push for tighter rules on Chinese-made chips.

(Note) Distillation: using a trained model's outputs to train another model efficiently.

(Source) Marubeni Institute

(Source) Marubeni Institute

Fiscal Risks and Monetary Policy

High Energy Prices and the AI Boom Add to Inflation Pressure

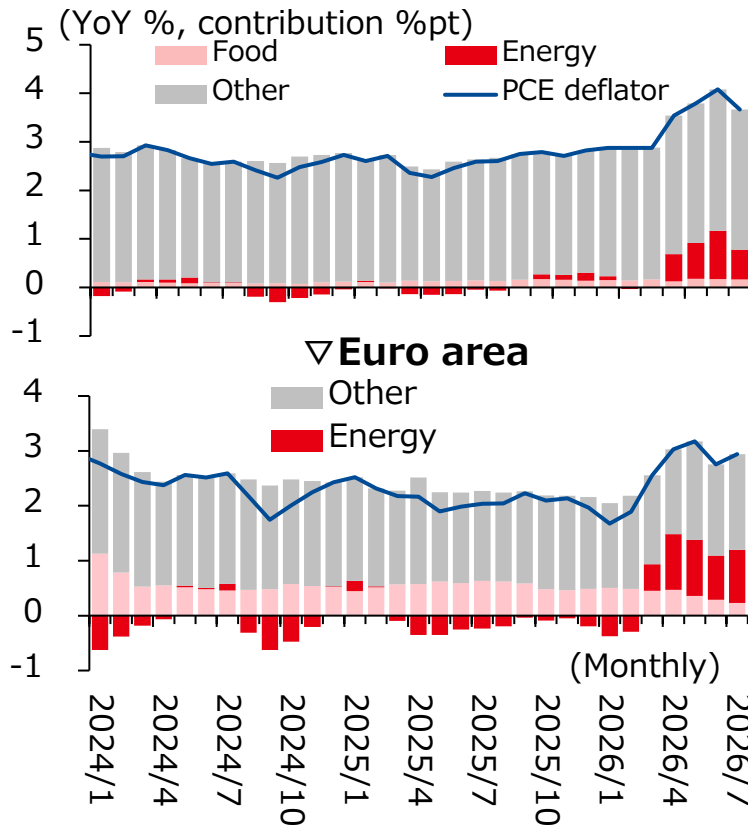
Cost increases from supply constraints amplified by demand growth driven by AI investment

- Higher energy prices from the Middle East feed through, not only directly, but also via transport and intermediate input costs into a wide range of items.
- At the same time, the AI boom supports demand through capex, jobs, incomes and asset prices while tightening power and equipment supply, adding to inflation pressure.

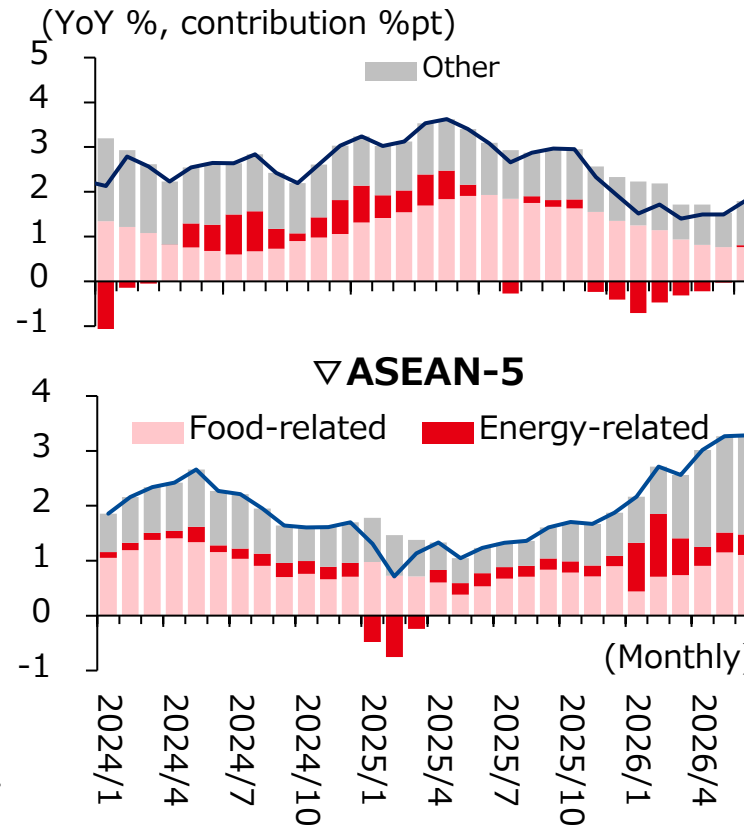
In addition, the AI boom is inflationary in the short run

▽ Inflation by country/region and contributions from food and energy

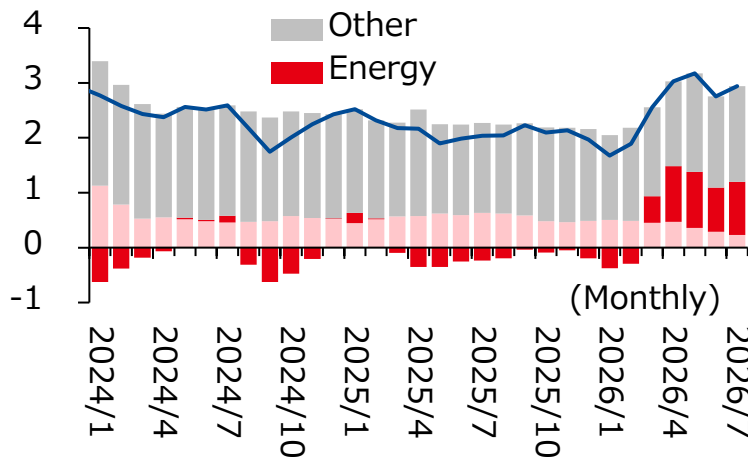
▽ United States



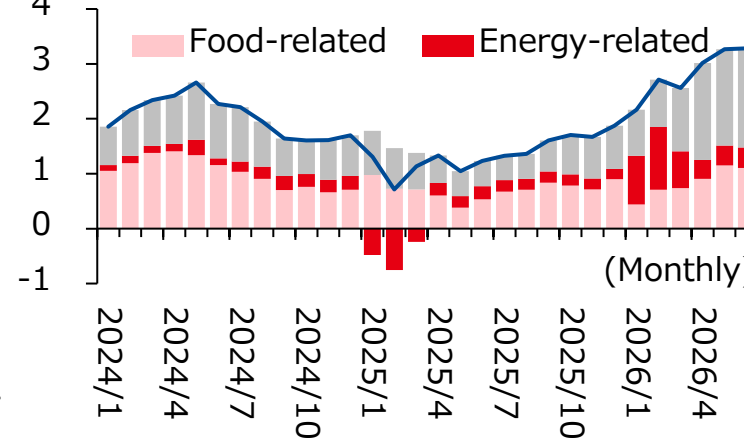
▽ Japan



▽ Euro area



▽ ASEAN-5



(1) Expansion of aggregate demand

- ✓ AI capex lifts employment, incomes and corporate profits, spilling over into related exports and household spending, tightening the balance and raising prices

(2) Power and equipment supply constraints

- ✓ Data center construction is driving a surge in demand for power, grids, transformers and cooling equipment

(3) Demand boost via asset prices

- ✓ AI expectations lift equity prices and valuations, supporting household spending and corporate funding

(4) Interaction with the energy supply shock

- ✓ Falling energy supply from the Middle East alongside rising AI power demand amplifies tightness and price increases

(Note) ASEAN-5 is weighted by PPP-based GDP.

(Source) Marubeni Institute, based on IMF and CEIC

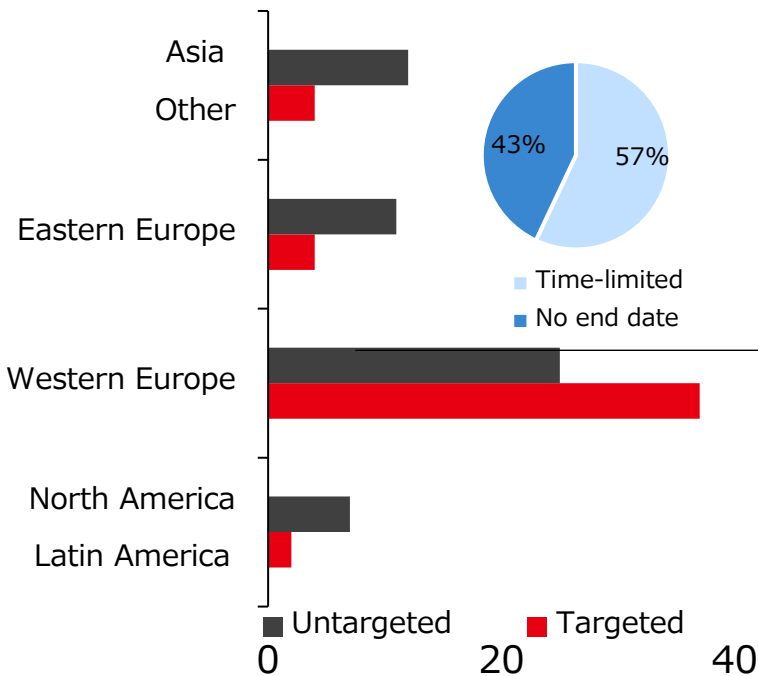
Broad Energy Support Amplifies Fiscal Risk

Rapidly increasing debt and a changing holder base may put government finance more fragile

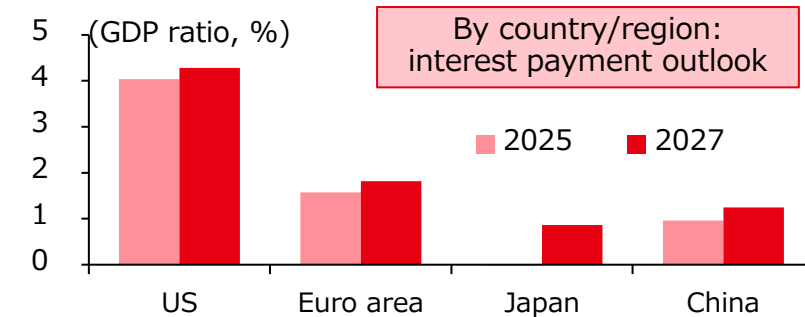
- In response to the Middle East situation, many countries have introduced energy support that is untargeted and lacks a clear end date. With government debt already high, prolonging such measures widens fiscal deficits and interest burdens.
- Yield increases from heavier bond issuance and fiscal concerns can be amplified by position adjustments at highly leveraged non-bank financial institutions (NBFIs), pushing government funding costs higher still. Broad suppression of fuel and power prices also delays demand adjustment and may prolong the fiscal burden.

▽ Potential problems with expansionary fiscal policy and energy subsidies

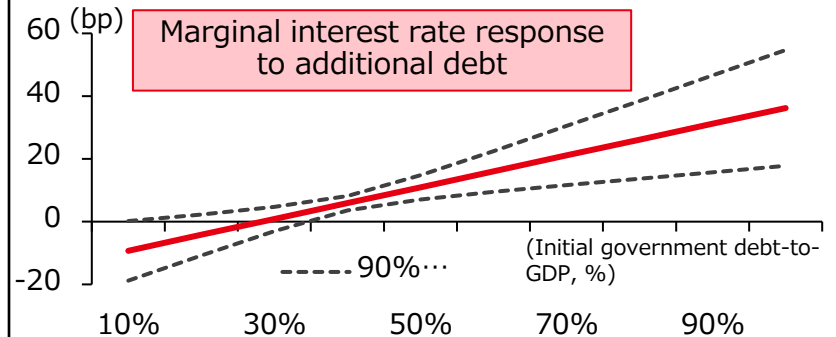
▽ Types and number of energy subsidy policies



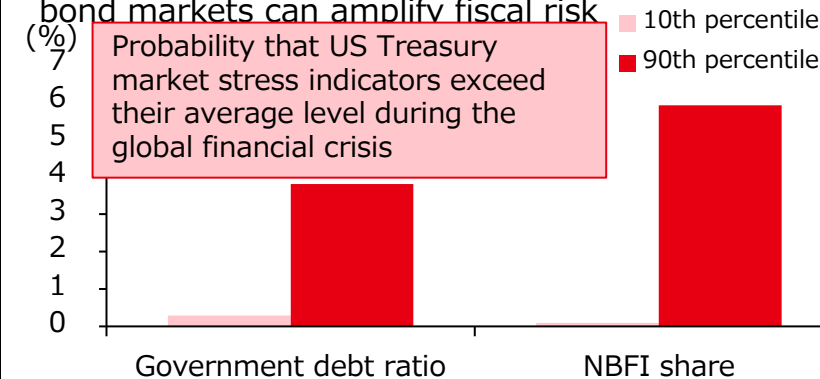
(1) Debt ratios are already high, so further fiscal expansion brings even larger interest costs



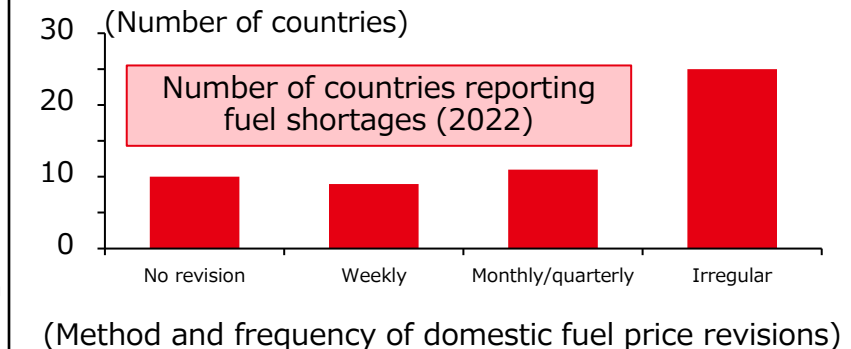
(2) In developing economies, a high starting debt ratio raises fiscal risk non-linearly



(3) The growing presence of NBFIs in government bond markets can amplify fiscal risk



(4) Broad price suppression delays energy demand adjustment and can magnify fiscal costs

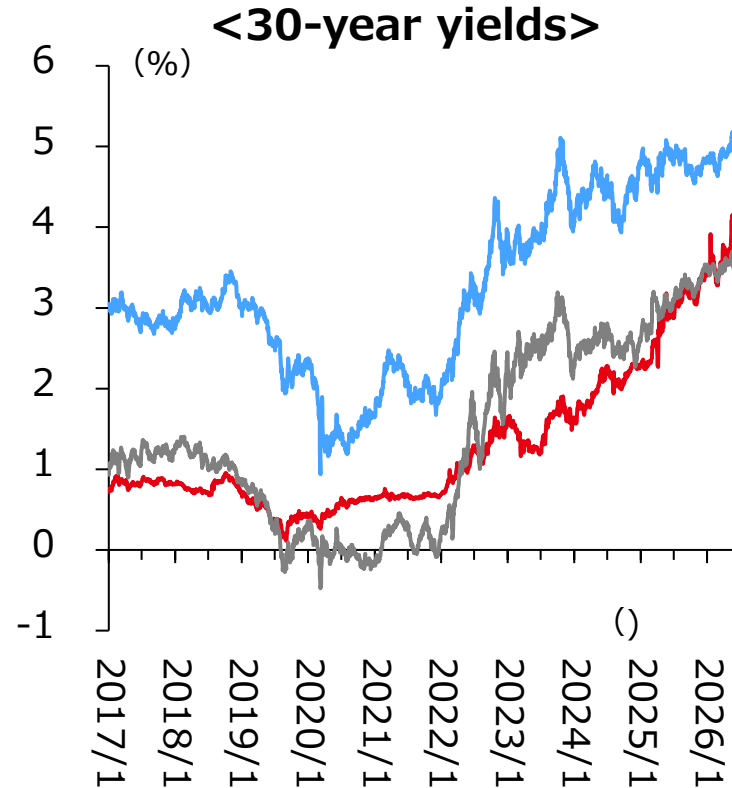
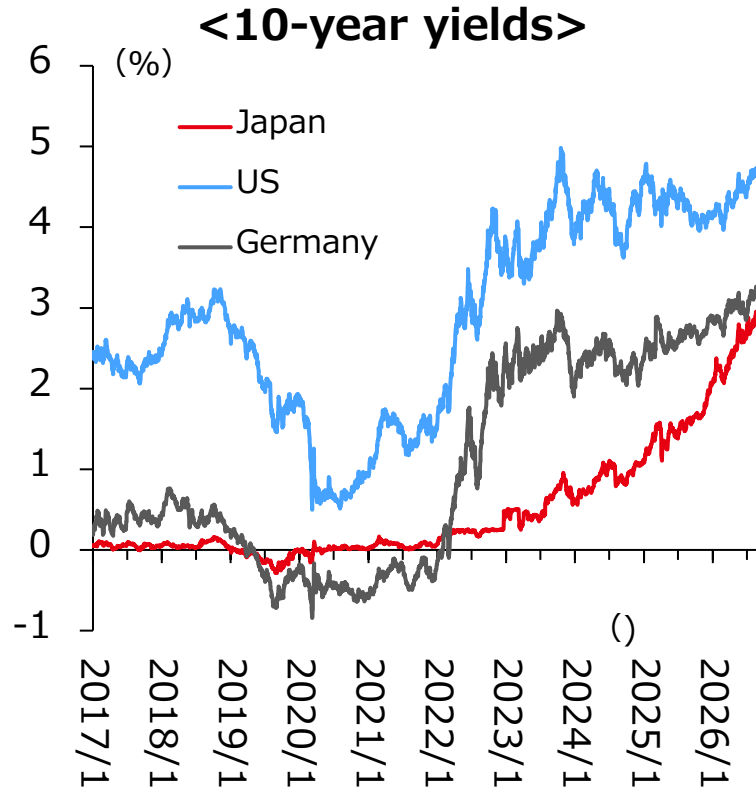


Long-term Yields Rise Globally on Inflation and Fiscal Risks

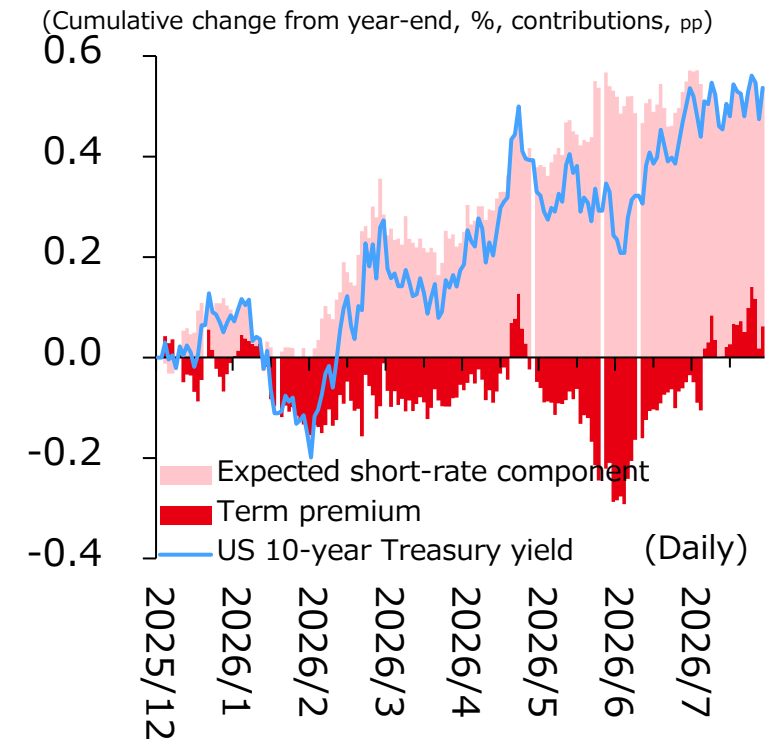
The impact on monetary policy, fiscal accounts and markets depends on what drives rates higher

- Long- and ultra-long yields in Japan, the US and Europe have risen sharply on inflation concerns, expectations of tightening, and wariness about deficits and bond issuance. In the US, increased corporate bond issuance tied to AI investment may also be adding upward pressure by increasing overall supply in the long-dated market.
- A higher term premium driven by fiscal and supply-demand concerns tightens financial conditions even without policy rate hikes, making it harder to judge the policy rate hike needed to contain inflation.

▽ Long- and ultra-long-term yields



▽ Decomposition of the US 10-year yield



Monetary Policy: Choosing the Right Tool for Each Job

Use the policy rate for price and demand stability, and liquidity support for market functioning

- With high energy prices and rising long-term yields occurring together, authorities must separate effects on prices and economic activity from effects on market functioning, and use the policy rate, liquidity support as well as prudential policy according to the objective.
- Fiscal support should be designed so as not to undercut tightening or policy credibility; fiscal, monetary and financial stability policies must be run consistently.

Monetary policy challenge (1): price and demand stability

(Policy judgment based on inflation persistence and demand trends)

▽ A typology of monetary policy responses to price and activity trends

Inflation broadens

<u>Demand is weak</u>	Adjust the extent and pace of tightening to keep expectations anchored without amplifying the downturn	Keep rates high; further tightening considered if needed.	<u>Demand is strong</u>
	Maintain the effective policy stance; room to ease if inflation pressure clearly recedes	Guard against financial conditions turning accommodative while demand stays strong	

Inflation is temporary

Monetary policy challenge (2): securing market functioning and financial stability

(Avoiding systemic risk; liquidity support and prudential policy)

▽ Risks to market functioning and financial stability, and policy responses

Dysfunction in government bond and short-term funding markets



- ✓ Keep liquidity and funding facilities ready for immediate activation.
- ✓ Central bank market support should be temporary, targeted and reversible

Stress amplification via repo markets



- ✓ Strengthen market infrastructure in normal times
- ✓ Improve visibility of positions and margin needs; central clearing of repo, etc.

NBFI leverage and spillover to banks



- ✓ Close data gaps and share data internationally
- ✓ Strengthen supervision; run stress tests and scenario analysis on banks and NBFIs

Note that interaction with fiscal policy is making monetary policy management harder

- Broad energy support eases household burdens but delays price-driven demand adjustment and can partly offset tightening. Support should be targeted at vulnerable groups with a clearly defined time limit and funding source.
- If deficits and bond issuance push up the term premium, financial conditions tighten, but note that waning confidence in fiscal and price stability can destabilize inflation expectations.

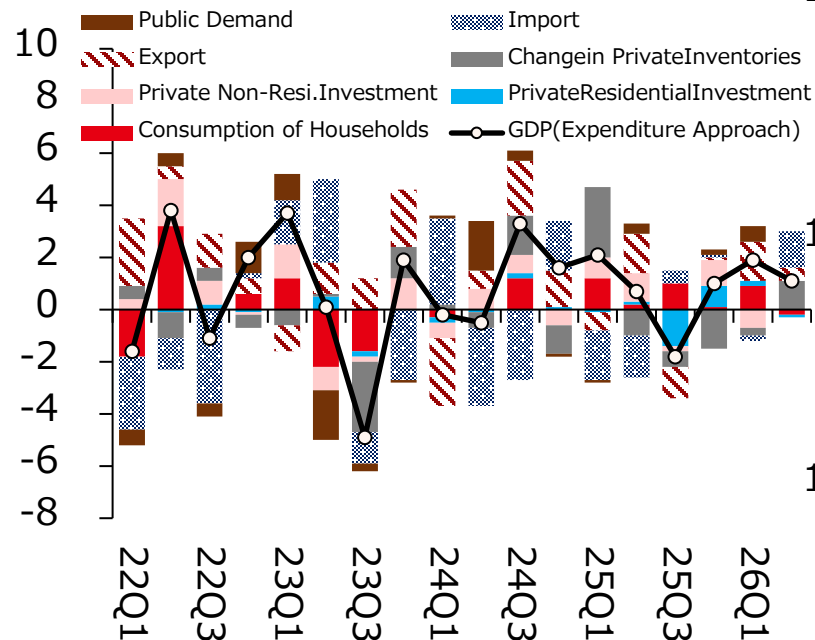
Japanese Economy

Output is resilient despite supply chain disruption, supported by AI demand

- Current: Q2 2026 growth held firm at +0.3% QoQ, lifted by resilient exports and inventory building. Consumption stalled amid weaker sentiment, while capex stayed solid on continued digital transformation (DX) and AI-related demand.
- Outlook: consumer prices are currently restrained by policy, but import and corporate goods prices have surged on higher resource and material costs from the Middle East, which will weigh on consumption ahead. A consumption tax cut on food in April 2027 should provide some support. With corporate profits high, AI-related demand and labor-saving investment continue to support capex.

▽Real GDP growth

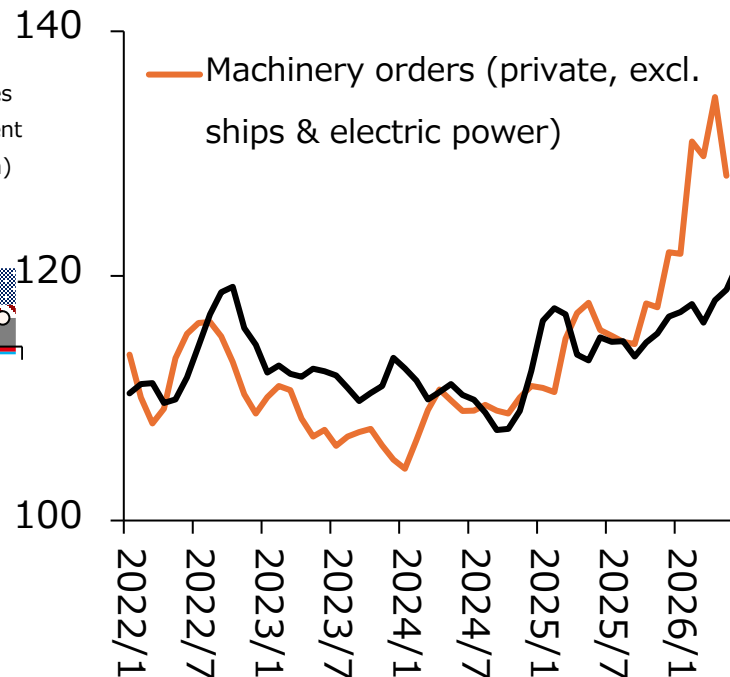
(Real, seasonally adjusted; QoQ annualized %, contributions in pp)



(Source) Cabinet Office

▽Capex-related indicators

(2020 = 100)

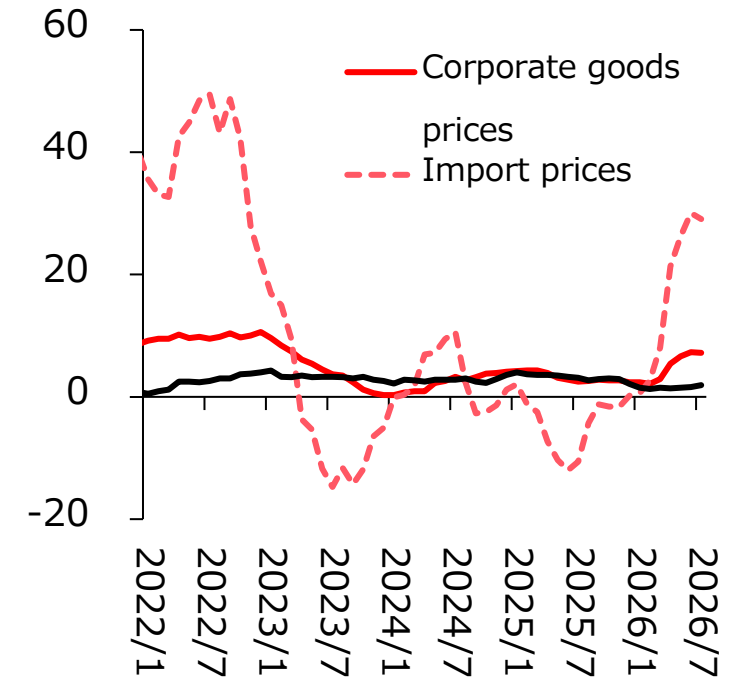


(Note) 3-month trailing moving average

(Source) Marubeni Institute, based on the Cabinet Office and METI

▽Price indicators

(YoY, %)



(Source) MIC, Bank of Japan



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