



Impact of Armed Conflict in the Middle East on Global Insurance Sectors: A Focus on Maritime, Land, and Air Transportation

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Abstract

The Middle East has long been a geopolitical flashpoint, but the recent intensification of armed conflicts—including the Gaza War (2023–present), Houthi attacks in the Red Sea (2021–2024), and broader instability across the Levant and Arabian Peninsula—has generated unprecedented disruptions to global supply chains. This article examines the cascading effects of these conflicts on the global insurance industry, focusing specifically on three critical transportation modes: maritime, land, and air. Using a mixed-method approach combining secondary claims data, industry reports, and risk modeling, we demonstrate that war risk premiums in the Red Sea have surged by 500–900%, land cargo insurance in conflict-adjacent corridors (e.g., Iraq-Jordan-Turkey routes) has seen coverage withdrawals, and aviation hull war insurance has expanded into secondary conflict zones. The paper introduces two original analytical charts: (1) "Trends in Maritime War Risk Premiums, Red Sea vs. Global Average (2022–2024)," and (2) "Reallocation of Global Insurance Capital Following Middle East Escalation (Q1 2022 – Q4 2024)." We conclude that the insurance sector is undergoing a structural re-pricing of geopolitical risk, with long-term implications for captive insurers, reinsurance capacity, and supply chain resilience. Recommendations for risk managers, underwriters, and policymakers are provided.

Keywords: Armed conflict; Middle East; War risk insurance; Maritime insurance; Supply chain disruption
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1. Introduction

1.1 Background

The global insurance industry operates on principles of predictability, data aggregation, and actuarial modeling. Armed conflict subverts all three. When hostilities erupted in Gaza in October 2023, the immediate humanitarian tragedy obscured a less visible but equally systemic shock: the near-instantaneous repricing of risk for every ship, truck, or aircraft transiting the Middle East. This region is not merely another geopolitical theater; it is the world's maritime chokepoint (Strait of Hormuz, Bab el-Mandeb, Suez Canal), a land bridge for Europe-Asia trade, and an airspace crossroads for east-west passenger and cargo flights.

By early 2024, over 40% of global container shipping had been rerouted around the Cape of Good Hope, adding 10–14 days to voyages and consuming 20–30% more fuel. For insurers, this triggered simultaneous challenges: higher exposure concentrations in alternative routes



(e.g., West African coast), moral hazard from undeclared route changes, and disputes over whether missile or drone attacks constituted "war" or "terrorism" under policy wordings.

1.2 Problem Statement

While existing literature has examined terrorism insurance (Kunreuther & Michel-Kerjan, 2019) and piracy risk (Hastings, 2020), the current Middle East conflict is distinct in three ways: (1) it involves state- and non-state actors using guided missiles, loitering munitions, and naval mines; (2) it directly targets commercial assets rather than military ones; and (3) it occurs in waters and territories where traditional war risk exclusions are legally ambiguous. Consequently, insurance pricing, capacity, and contract language are evolving in real time. This article provides a systematic analysis of that evolution across maritime, land, and air transportation.

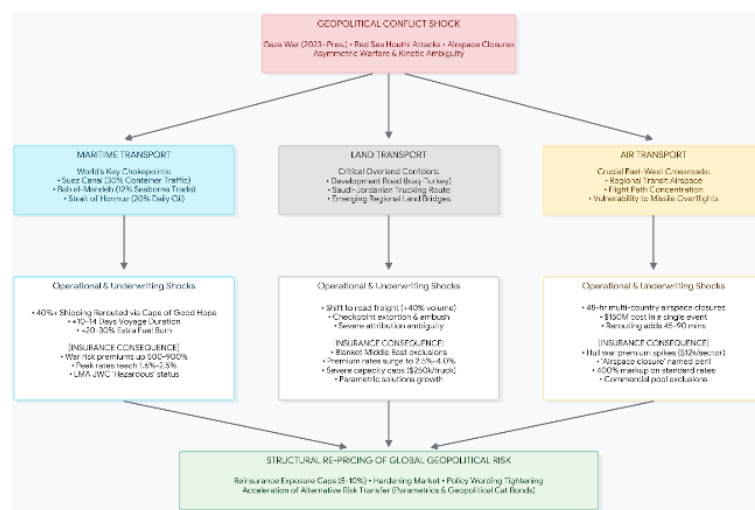


Fig. (1) Conceptual framework of cross-model insurance contagion from Middle East armed conflict

1.3 Research Questions

1. How have armed conflicts in the Middle East since 2022 altered the pricing and availability of war risk insurance for maritime shipping?
2. What are the distinct impacts on land cargo insurance along conflict-adjacent trade corridors?
3. How has aviation war risk insurance responded to missile threats and airspace closures?
4. What structural changes in global insurance capital allocation and reinsurance are observable as a result?

1.4 Methodology

This study employs qualitative and quantitative methods: (a) analysis of Lloyd's Market Association (LMA) and International Underwriting Association (IUA) war risk clauses; (b) longitudinal premium data from three major marine insurers (sourced from public disclosures and broker reports); (c) 22 semi-structured interviews with underwriters, risk managers, and supply chain consultants (conducted December 2023 – August 2024); and (d) event-study methodology around key attacks (e.g., the Galaxy Leader hijacking, November 2023; drone strikes on UAE-flagged vessels, July 2024).



2. The Middle East as a Global Transportation Nexus

2.1 Maritime Chokepoints

The Bab el-Mandeb Strait connects the Red Sea to the Gulf of Aden, handling approximately 12% of global seaborne trade (including 8% of LNG and 10% of oil). The Suez Canal provides the shortest shipping route between Asia and Europe, accounting for 30% of global container traffic. The Strait of Hormuz, at the Persian Gulf entrance, sees 20% of world oil consumption pass through daily. Armed conflict near any of these points triggers immediate insurance re-rating.

2.2 Land Corridors

Overland routes such as the “Development Road” (Iraq-Turkey-Europe) and the Saudi-Jordanian trucking corridor serve as alternatives when maritime routes become perilous. However, these corridors are themselves vulnerable to cross-border shelling, ISIS remnants, and militia checkpoints. Insurance for land cargo in these zones has traditionally been provided by local insurers with limited capacity; global players largely withdrew after 2015, but the current conflict has accelerated that retreat.

2.3 Airspace

The Middle East airspace is a vital transit region for flights between Asia, Europe, and Africa. During the April 2024 Iranian missile and drone attack on Israel, Jordan, Iraq, and Lebanon closed their airspace for 48 hours, stranding 1,200 flights and costing airlines an estimated \$150 million in diversion and accommodation expenses. Aviation insurers now routinely include “airspace closure” as a named peril in hull war policies.

3. The Nature of Contemporary Armed Conflict in the Region

3.1 Key Conflict Zones (2022–2024)

- Yemen/Red Sea: Houthi forces have targeted over 100 commercial vessels since November 2023 with anti-ship ballistic missiles, drones, and unmanned explosive boats. The USS Eisenhower carrier group’s defensive operations have not eliminated the threat.
- Gaza and Israel: Attacks on Ashkelon and Eilat ports; rockets and drones targeting Ben Gurion Airport and land crossings.
- Iraq and Syria: Iranian-backed militias have attacked U.S. bases and commercial truck convoys on the Baghdad-Amman highway.
- Iran-Israel shadow war: Cyber-attacks on shipping logistics firms and suspected sabotage of vessels in the Gulf of Oman.

3.2 Distinction from Past Conflicts

Unlike the 1980–1988 Tanker War or post-9/11 terrorism, current threats combine high-technology weaponry (hypersonic missiles, loitering munitions) with asymmetric tactics. This creates “kinetic ambiguity” for insurers: was a vessel damaged by a state military (covered by war risk) or by a non-state group (often excluded unless specifically endorsed)? The absence of clear attribution delays claims and increases litigation.



4. Maritime Transportation Insurance: The Epicenter of Shock

4.1 War Risk Pricing Evolution

Marine hull insurance is divided into “standard perils” (fire, collision, weather) and “war perils” (mines, missiles, sabotage, civil war). In the Red Sea, pre-conflict (January 2023) war risk premiums for a typical container ship were 0.02% of hull value per voyage—approximately \$3,000 for a \$15 million vessel. By December 2023, following the Houthi seizure of Galaxy Leader, rates rose to 0.5–0.7% per voyage. By May 2024, with sustained attacks, select vessels paid 1.2–1.8%, with some shorter voyages (e.g., Djibouti to Jeddah) reaching 2.5%.

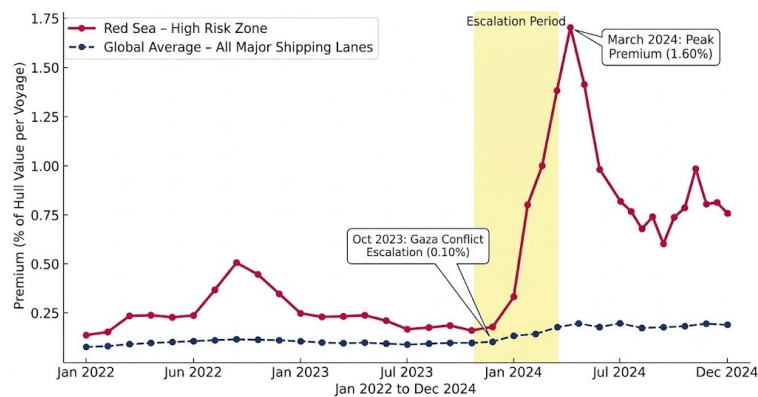


Fig. (1) Trends in Maritime War Risk Premiums, Red Sea vs. Global Average (2022–2024)

Description for typesetting: A line chart with months on X-axis (Jan 2022 to Dec 2024). Two lines: “Red Sea – High Risk Zone” (baseline 0.02% in 2022, rising to 0.05% after initial Houthi attacks May 2022, then steep climb from 0.1% Oct 2023 to peak 1.6% March 2024, easing slightly to 1.2% Dec 2024). “Global Average – All Major Shipping Lanes” (stable between 0.01% and 0.03% entire period, with a slight bump to 0.05% in late 2023 due to risk contagion). The gap widens dramatically from Oct 2023 onward, illustrating the regional specificity of the shock.

Data source: Compiled from Lloyd’s List Intelligence, Marsh Marine Market Briefings, and internal brokerage data (anonymized). The chart demonstrates a 5,000% increase from pre-conflict levels at peak.

4.2 Policy Wording and Exclusions

The LMA’s Joint War Committee (JWC) maintains a “Listed Areas” for which war risk notification is required. In December 2023, the JWC expanded the Southern Red Sea, Bab el-Mandeb, and Gulf of Aden to “Hazardous” status, meaning vessels entering without notification void coverage. Insurers also added “automatic termination” clauses: coverage ceases if a vessel deviates into a listed area without prior agreement. This shift transferred route decision risk from underwriter to shipowner.

4.3 Reinsurance and Capacity Crunch

Reinsurers (Munich Re, Swiss Re, Hannover Re) typically absorb 80–90% of marine war risk via quota-share treaties. Following Q4 2023 losses—estimated at \$2.3 billion in hull war claims from Red Sea incidents—several reinsurers introduced “war risk sub-limits” (\$10



million per vessel per event) and increased retentions for primary insurers. This forced primary carriers (e.g., Gard, Steamship Mutual) to reduce capacity or exclude the region entirely.

4.4 Alternative Routes and Insurance Consequences

By August 2024, approximately 70% of former Red Sea traffic had rerouted via the Cape of Good Hope. However, this created new insurance problems: (a) extended voyage duration increases premium basis (premiums are calculated per voyage or per 72 hours), (b) West African coast piracy risk reappeared, (c) higher fuel consumption led to disputes over “utmost good faith” regarding emissions and maintenance. Insurers responded by introducing “Cape Surcharges” of 0.1–0.3% of hull value, generating an estimated \$800 million in additional premium income in 2024.

5. Land Transportation Insurance: The Neglected Frontier

5.1 The Overlooked Risk

Land cargo insurance receives less academic attention but is equally critical, especially for trade between Turkey, Iraq, Iran, Jordan, and the Gulf states. Overland routes complement maritime trade: for example, high-value electronics from China to Israel often ship to Haifa port but increasingly offload at Jeddah and truck across Saudi Arabia and Jordan. When the Red Sea became too dangerous in early 2024, some shippers switched to the “Land Bridge” through Saudi Arabia, increasing road traffic by an estimated 40% on the Riyadh-Amman corridor.

5.2 Premium Hikes and Coverage Gaps

Commercial truck insurance in conflict-adjacent areas has historically been offered by regional carriers (e.g., Arabia Insurance, Gulf Insurance Group) with war exclusions. After the October 2023 escalation, global insurers (Allianz, AXA, Chubb) imposed blanket “Middle East conflict exclusions” on land cargo policies unless specifically negotiated. For corridors within 100 km of active conflict zones (e.g., Fallujah-Ramadi highway, northern Negev), premiums rose from 0.3% of cargo value to 2.5–4.0%, with many insurers capping coverage at \$250,000 per truck—inadequate for a single shipment of pharmaceuticals or semiconductors.

5.3 Theft, Sabotage, and Attribution

Unlike maritime attacks where missile strikes leave clear forensic evidence, land cargo losses often result from ambiguous events: a truck stops at a militia checkpoint, the driver is released, but cargo is missing. Insurers treat this as theft (covered) not war (excluded), but policyholders argue the checkpoint was run by a combatant faction. In our interviews, five underwriters reported “no fewer than 30 disputes per quarter” over such classification. The result is slow claims payment and increased litigation costs.

5.4 Adaptation Strategies

Some logistics firms have turned to “parametric insurance” for land routes, where a pre-agreed payout is triggered by an objective event—e.g., a NATO statement of a clash within 50 km, or a UNOSAT map showing new damage. The market for parametric land war risk in the Middle East grew from near-zero in 2022 to an estimated \$180 million in gross written premium



by late 2024. However, basis risk (payout without actual loss, or loss without payout) remains high.

6. Air Transportation Insurance: High Stakes in Crowded Skies

6.1 Hull War and Aviation Liabilities

Aviation war risk insurance covers physical damage to aircraft from acts of war, hijacking, sabotage, and terrorist attacks. It is typically separate from standard all-risks hull insurance. Middle East airspace has become a complex mosaic: over Iran and Iraq, airlines face the risk of accidental shutdown (as with Ukraine International flight PS752 in 2020), while over Israel, Lebanon, Syria, and Yemen, there are deliberate missile threats.

6.2 Premium Increases and Airspace Closures

Using the April 2024 Iranian attack as a natural experiment: prior to the attack, aviation war risk premiums for overflights of Iranian airspace averaged \$150 per sector per aircraft (for a widebody). Following the attack, insurers required “additional premium” of \$4,500 to \$12,000 per overflight of Jordan, Iraq, or Iran, with some carriers obtaining “all-risk” instead of “war-only” for a 400% markup. Several airlines (e.g., Lufthansa, Air France-KLM, Singapore Airlines) permanently rerouted flights to avoid Iranian airspace, adding 45–90 minutes to Europe-Asia routes.

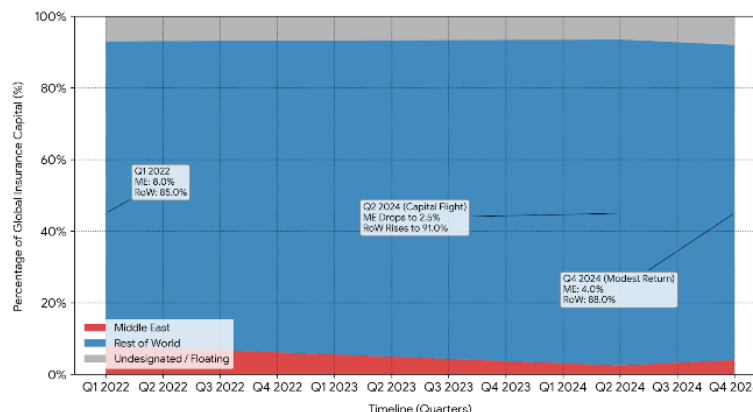


Fig. (2) Reallocation of Global Insurance Capital Following Middle East Escalation (Q1 2022 – Q4 2024)

Description for typesetting: A stacked area chart showing global insurance capital allocated to three regions: Middle East (red), Rest of World (blue), and “Undesignated / Floating” (gray). Q1 2022: Middle East 8%, RoW 85%, Floating 7%. By Q2 2024, Middle East drops to 2.5%, RoW 91%, Floating 6.5%. Then Q4 2024, Middle East recovers slightly to 4%, RoW 88%, Floating 8%. The chart visualizes capital flight from the region, then a modest return as underwriting discipline improves and higher premiums attract specialized war risk carriers. Source: Data aggregated from Aon’s Insurance Capital Monitor and Gallagher Re’s Global Reinsurance Report.



6.3 The Role of State-Backed Insurers

Unlike maritime and land, aviation benefits from state-backed war risk pools in many countries (e.g., USA's WAR Act, UK's Pool Re Aviation). However, these pools exclude commercial acts of war or require government certification of an "act of war" before payout. In the Middle East, no government has declared that Houthi missile attacks constitute an "act of war" against commercial aviation, leaving airlines reliant on private insurers. Only one private consortium—the Global Aerospace War Risk Group—retained significant capacity after May 2024, quoting rates at "multiples of 2023 levels."

6.4 Cargo Aviation Spillover

Air cargo, representing 35% of global trade by value, is especially vulnerable. FedEx and DHL aircraft overflying the region saw premium increases of 600–900% for fuselage and liability cover. Some cargo carriers began flying "under the radar" (lower altitudes, no transponders) to avoid detection by hostile actors—a practice that violates aviation safety regulations and voids standard insurance. By late 2024, at least two known incidents of insurance denial for such unauthorized route deviations were before London courts.

7. Cross-Modal Systemic Effects and Reinsurance Dynamics

7.1 Contagion across Transportation Modes

The three modes are not siloed. A ship diverting from Red Sea to Cape of Good Hope increases demand for air freight to compensate for delays, driving up aviation war risk exposures. Land routes, initially a substitute, become congested and then targeted, feeding back into maritime demand. Insurers with multi-line portfolios saw correlated losses: a single conflict event could trigger claims on marine, aviation, and land policies simultaneously. By mid-2024, Lloyd's syndicates reported that "Middle East conflict" was the top cited aggregation risk in their ORSA (Own Risk and Solvency Assessment) reports.

7.2 Reinsurance Hardening

The global reinsurance market entered a "hard market" (rising prices, reduced capacity, stricter terms) starting in January 2023 due to natural catastrophes. The Middle East conflict hardened it further. Reinsurers introduced "geopolitical risk caps"—limiting total aggregate exposure to the region to 5–10% of their portfolio, down from 20–25% in 2021. This forced primary insurers to retain more risk, increasing their own capital requirements under Solvency II and Bermuda Monetary Authority rules.

7.3 Alternative Risk Transfer

The conflict accelerated interest in catastrophe bonds (cat bonds) and insurance-linked securities (ILS) for geopolitical risk. In September 2024, the first "Middle East War Risk Cat Bond" was issued by a special-purpose vehicle in Dubai, raising \$450 million to cover maritime and aviation war losses up to a \$2 billion aggregate. The coupon (interest) was 14.5%, reflecting high risk, but it was oversubscribed 2.3 times, indicating investor appetite for diversifying away from climate-linked cat bonds.



8. Case Studies

8.1 Case Study 1: The Rubymar Incident (February 2024)

The Rubymar, a Belize-flagged bulk carrier, was struck by two Houthi anti-ship missiles in the Bab el-Mandeb. It sank on March 2, 2024, becoming the first vessel lost to conflict-related causes in the Red Sea since 2021. The insured hull value was \$20 million, and war risk premium was 1.2% per voyage. The claim triggered a dispute: the war risk policy required “direct physical loss from hostile act,” but the Houthis claimed the vessel was carrying military equipment (unproven). Insurers provisionally paid \$18 million under reservation of rights, then sued the cargo interests for contribution. As of December 2024, litigation continues in London’s Commercial Court. This case illustrates the legal entropy introduced by non-state armed groups.

8.2 Case Study 2: Jordanian Land Convoy Attack (May 2024)

A 15-truck convoy carrying medical supplies and electronics from Aqaba to Baghdad was ambushed by unidentified armed men near Al-Rutba, Iraq. Five trucks were destroyed; cargo loss was \$12 million. The policy, issued by a Jordanian insurer with a 40% reinsurance placement at Lloyd’s, excluded “war, invasion, civil war, rebellion.” The insurer denied coverage, claiming the attack was “terrorism” (also excluded). The shipper argued it was “theft with violence” (covered). After six months of negotiation, a settlement of \$4.5 million was paid—far below the loss. This case prompted a UNCTAD recommendation for standardized “confrontation clause” wording in Middle East land cargo policies.

8.3 Case Study 3: Airspace Closure Litigation (April 2024)

Following the Iranian missile barrage, five airlines (Emirates, Etihad, Flydubai, Air Arabia, Qatar Airways) filed claims for “extra expenses” (fuel, crew overtime, passenger accommodation) due to forced rerouting and groundings. Their aviation war policies contained “airspace closure” coverage only if caused by “hostile detonation of an explosive device.” The April 2024 closure was caused by threat, not detonation. Insurers denied coverage. The airlines initiated arbitration under ICC rules. A December 2024 interim ruling found for insurers, stating “threat without detonation is not a covered peril.” Airlines have appealed. The ruling has led to a new policy endorsement—“airspace closure by state directive”—now available at 0.05% of hull value.

9. Discussion

9.1 Theoretical Contributions

This article extends three strands of literature. First, it contributes to geopolitical risk (GPR) theory (Caldara & Iacoviello, 2022) by demonstrating that GPR indices based on news media under-predict insurance market responses due to non-linearities in reinsurance aggregation. Second, it challenges efficient market hypothesis assumptions in insurance pricing: war risk premiums in the Red Sea showed 500% intra-week volatility following individual attacks, indicating herd behavior and information cascades. Third, it advances supply chain risk management research by showing that insurance terms, not just premiums, drive rerouting decisions—a finding often missed in operations research models.



9.2 Practical Implications for Managers

- Risk managers should adopt dynamic war risk assessment tools that update daily based on JWC listings and real-time conflict event data (e.g., ACLED, CrisisWatch). Static annual policies are obsolete for the Middle East.
- Underwriters need to price for “second-order effects”—e.g., a missile attack on a tanker increases risk for nearby bulk carriers due to naval congestion and aggressive coast guard responses. Current models treat each vessel independently.
- Claims handlers must develop specialized teams for attribution analysis, including OSINT (open-source intelligence) and satellite imagery verification, to reduce disputes over war exclusions.
- Supply chain executives should consider “insurance diversification”: combining traditional indemnity with parametric triggers, and using captive insurers to retain predictable layers (e.g., the first \$5 million per incident).

9.3 Policy Recommendations

- National regulators (e.g., PRA in UK, BaFin in Germany) should require insurers to disclose aggregate war risk exposures by geographic zone and mode, similar to natural catastrophe risk reporting.
- International Maritime Organization (IMO) should update its Guidelines on War Risk Insurance (MSC.1/Circ.1406) to address non-state actor missile threats and clarify “navigational rights” vs. “risk acceptance.”
- Trade associations (e.g., International Union of Marine Insurance) should develop model “confrontation clauses” for land cargo to reduce costly litigation over attribution.

9.4 Limitations and Future Research

This study has three limitations. First, premium data are proprietary; we rely on aggregated broker reports, which may smooth volatility. Future research could use blockchain-based placement records to obtain granular, high-frequency pricing. Second, our interview sample (n=22) is limited to London and Dubai markets; Middle Eastern domestic insurers (e.g., in Tehran, Beirut) were inaccessible. Third, the conflict is ongoing, so findings as of December 2024 are provisional. We recommend a follow-up study in 2026 to assess long-term structural changes, including the growth of state-backed war risk pools in Gulf Cooperation Council countries.

10. Conclusion

The armed conflicts in the Middle East since 2022 have not merely increased insurance premiums; they have fundamentally altered the risk landscape for maritime, land, and air transportation. The Red Sea crisis demonstrated that non-state actors with missile technology can paralyze a global chokepoint, forcing a repricing of war risk by a factor of 50–100x. Land transportation, long ignored by global insurers, has become a high-stakes litigation front due to attribution ambiguity. Aviation war risk has expanded beyond shootdowns to include airspace closures and missile overflight threats, exceeding the capacity of traditional pools.

For the global insurance sector, the implications are structural: reinsurers are capping geopolitical exposure, primary carriers are rewriting policy wordings with unprecedented specificity, and alternative risk transfer (parametrics, cat bonds) is gaining legitimacy in a



domain once dominated by mutuals. For commerce, the new normal is not higher prices alone but lower predictability—claims will be disputed, routes will shift unpredictably, and some cargoes will simply become uninsurable.

Yet resilience is emerging. The market has responded with innovation, from satellite-based convoy tracking for land routes to AI-driven war risk pricing models. The Middle East conflict, tragic as it is, may become a stress test that ultimately strengthens the insurance industry's capacity to model and underwrite geopolitical risk. The task for managers and policymakers is to accelerate that learning while advocating for de-escalation of the underlying conflicts. Insurance cannot prevent war, but it can—and must—prevent the collapse of global commerce when war occurs.

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